

DRINKING WATER SURVEILLANCE PROGRAM

**AMHERSTBURG  
WATER SUPPLY  
SYSTEM**

REPORT FOR 1991 AND 1992



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**AMHERSTBURG WATER SUPPLY SYSTEM  
DRINKING WATER SURVEILLANCE PROGRAM  
REPORT FOR 1991 AND 1992**

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EXECUTIVE SUMMARY  
DRINKING WATER SURVEILLANCE PROGRAM  
AMHERSTBURG WATER SUPPLY SYSTEM  
1991 AND 1992 REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to include all municipal supplies in Ontario. In 1991, 96 supplies and in 1992, 109 supplies were being monitored.

The Amherstburg water treatment plant is a conventional treatment plant which treats water from the Detroit River. The process consists of coagulation, flocculation, clarification (upflow clarifier), filtration and disinfection. Chlorine is added at the mouth of the intake structure for zebra mussel control when the raw water temperature is above 12°C. Powder activated carbon is added for taste and odour control. This plant has a rated capacity of 9.0 x 1000 m<sup>3</sup>/day. The Amherstburg water supply system serves a population of approximately 16,000.

Water at the plant and at five locations in the distribution system was sampled for the presence of approximately 180 parameters. Parameters were divided into the following groups: bacteriological, inorganic and physical (laboratory chemistry, field chemistry and metals), organic (chloroaromatics, chlorophenols, pesticides and PCB, phenolics, polyaromatic hydrocarbons and volatiles) and radiological (radionuclides). Most laboratory analyses were conducted at the Ministry of the Environment and Energy facilities in Rexdale, Ontario. Radionuclides were analyzed by the Ministry of Labour.

Table A is a summary of all results by group.

No known health related guidelines were exceeded.

The Amherstburg water supply system, for the sample years of 1991 and 1992, produced good quality water and this was maintained in the distribution system.

TABLE A  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

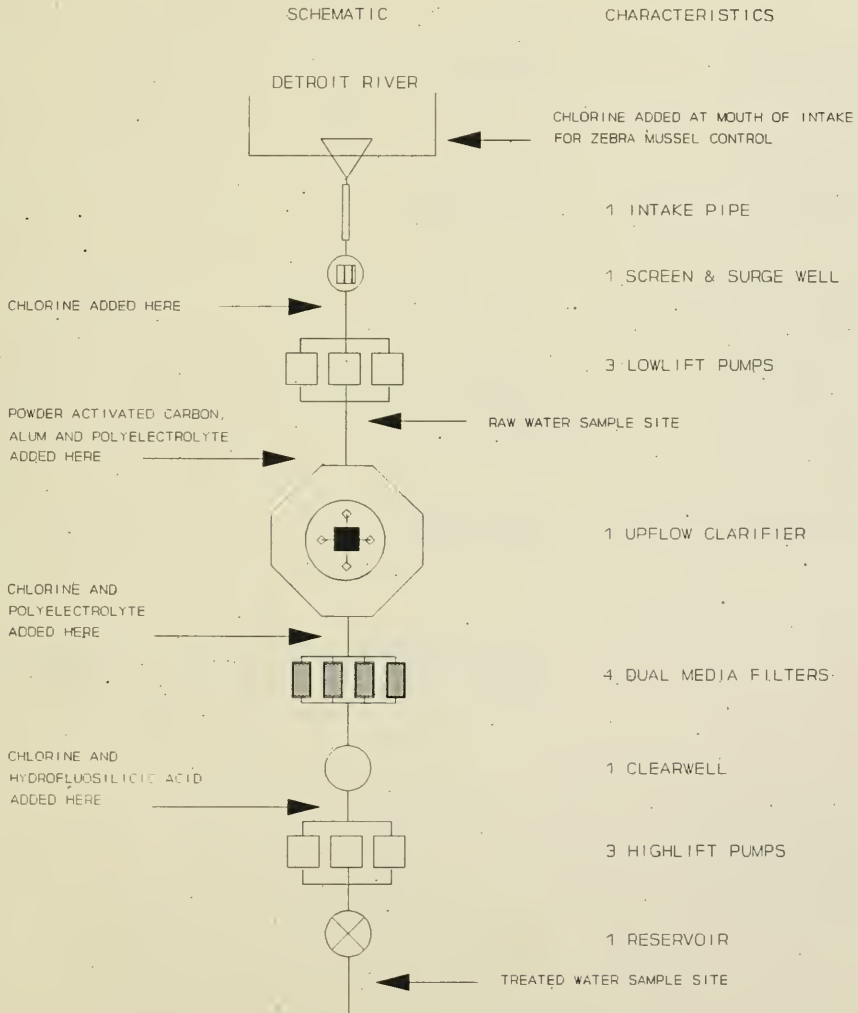
SUMMARY TABLE BY SCAN

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE  
A " " INDICATES THAT NO SAMPLE WAS TAKEN

SCAN	SITE		RAW		TREATED		DALHOUSIE ST		FORT ST	
	TESTS	%POSITIVE	TESTS	%POSITIVE	TESTS	%POSITIVE	TESTS	%POSITIVE	TESTS	%POSITIVE
BACTERIOLOGICAL	36	33	91	10	1	10	2	0	1	0
CHEMISTRY (FIELD)	36	34	94	72	72	100	24	24	12	100
CHEMISTRY (LABORATORY)	280	257	91	281	198	70	83	72	86	37
METALS	288	114	39	288	87	30	92	46	50	20
CHLORAROMATICS	140	0	0	126	0	0	14	0	0	0
CHLOROPHENOLS	18	0	0	18	0	0	0	0	0	0
PESTICIDES AND PCB	331	0	0	315	0	0	22	0	0	0
PHENOLICS	12	0	0	12	1	8	0	0	0	0
POLYAROMATIC HYDROCARBONS	68	0	0	51	0	0	17	0	0	0
SPECIFIC PESTICIDES	80	0	0	80	0	0	1	0	0	0
VOLATILES	358	0	0	358	48	13	58	8	13	4
RADIONUCLIDES	28	8	28	28	6	21	0	0	0	0
TOTAL	1,675	446	1,639	413	313	150	167	73		

FIGURE 1

# AMHERSTBURG WATER TREATMENT PLANT







## **DRINKING WATER SURVEILLANCE PROGRAM**

### **AMHERSTBURG WATER SUPPLY SYSTEM 1991 AND 1992 REPORT**

#### **INTRODUCTION**

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to include all municipal supplies in Ontario. In 1991, 96 supplies and in 1992, 109 supplies were being monitored.

Appendix A has a full description of the DWSP.

The DWSP was initiated for the Amherstburg water supply system in the spring of 1985 as part of a study on the St. Clair/Detroit River area. Previous annual reports have been published for 1986, 1987, 1988, 1989 and 1990.

#### **PLANT DESCRIPTION**

The Amherstburg water treatment plant is a conventional treatment plant which treats water from the Detroit River. The process consists of coagulation, flocculation, clarification (upflow clarifier), filtration and disinfection. Chlorine is added at the mouth of the intake structure for zebra mussel control when the raw water temperature is above 12°C. Powder activated carbon is added for taste and odour control. This plant has a rated capacity of  $9.0 \times 1000 \text{ m}^3/\text{day}$ . The Amherstburg water supply system serves a population of approximately 16,000.

The sample day flows ranged from  $6.3 \times 1000 \text{ m}^3/\text{day}$  to  $13.1 \times 1000 \text{ m}^3/\text{day}$ .

General plant information is presented in Table 1 and a schematic of plant processes, chemical addition points and sampling locations in Figure 1.

#### **SAMPLING AND ANALYSES**

Stringent DWSP sampling protocols were followed to ensure that all samples were collected in a uniform manner (see Appendix B).

Sample lines in the plant were flushed prior to sampling to ensure that the water obtained was indicative of its origin and not residual water standing in the sample line.

Attempts were made to capture the same block of water at each sampling point by taking the retention time into consideration. Retention time was calculated by dividing the volume of water between two sampling points by sample day flow. For example, if it was determined that retention time within the plant was five hours, then there would be a five hour interval between the raw and treated sampling. Similarly, if it was estimated that it took approximately one day for the water to travel from the plant to the distribution system site, this site would be sampled one day after the treated water from the plant.

To obtain a representative raw water sample, free from any added chemicals, at plants which used chlorine for zebra mussel control, the operator was required to turn off the chlorine feed to the mouth of the intake and allow enough time for the chlorinated water to clear from the intake works.

Plant operating personnel routinely analyzed parameters for process control (Table 2).

At all distribution system locations, two types of samples were obtained, a standing and a free flow. The standing sample consisted of water that had been in the household plumbing and service connection for a minimum of six hours. These samples were used to make an assessment of the change in the levels of inorganic compounds and metals due to leaching from, or deposition on, the plumbing system. The only analyses carried out on the standing samples, therefore, were laboratory chemistry and metals. The free flow sample represented fresh water from the distribution system main, since the sample tap was flushed for five minutes prior to sampling.

Water at the plant and at five locations in the distribution system was sampled for the presence of approximately 180 parameters. Parameters were divided into the following groups: bacteriological, inorganic and physical (laboratory chemistry, field chemistry and metals), organic (chloroaromatics, chlorophenols, pesticides and PCB, phenolics, polyaromatic hydrocarbons and volatiles) and radiological (radionuclides). Most laboratory analyses were conducted at the Ministry of the Environment and Energy facilities in Rexdale, Ontario. Radionuclides were analyzed by the Ministry of Labour.

## RESULTS

Field measurements were recorded on the day of sampling and were entered onto the DWSP database as submitted by plant personnel.

Table 3 contains information on delay time between the raw and treated water sampling, flow rate, and treatment chemical dosages.

Table 4 is a summary of all results by parameter and by water type. If a parameter was not detected, the total number of negative sample results is given. In contrast, if a parameter was detected at any location, the detailed results for all samples are provided.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment and Energy laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 lists all parameters analyzed in the DWSP.

Associated guidelines and detection limits are also supplied on Tables 4 and 5. Parameters are listed alphabetically within each scan.

## DISCUSSION

### GENERAL

Water quality was judged by comparison with the Ontario Drinking Water Objectives publication (ODWOs). These objectives are applied to free flowing water. When an Ontario Drinking Water Objective (ODWO) was not available, guidelines/limits from other agencies were used. These guidelines were obtained from the Parameter Listing System database.

The guidelines are evaluated on the results from the free flowing samples. Standing samples in the distribution system can show elevated concentrations in certain metals if the water is corrosive or if the standing time is excessive. Flushing the tap until the water achieves the coolest temperature will ensure that the water used for consumption will contain minimum concentrations of metals.

IN THIS REPORT, DISCUSSION IS LIMITED TO:

- THE TREATED AND DISTRIBUTED WATER;
- ONLY THOSE PARAMETERS WITH CONCENTRATIONS ABOVE  
GUIDELINE VALUES; AND
- POSITIVE ORGANIC PARAMETERS DETECTED.

### BACTERIOLOGICAL

Guidelines for bacteriological sampling and testing of a supply are developed to maintain a proper supervision of its bacteriological quality. Routine monitoring programs usually require that multiple samples be collected in a given system. Full interpretation of bacteriological quality cannot be made on the basis of single samples. Standard plate count was the only bacteriological analysis conducted on the treated and distributed water.

Standard plate count is a test used to supplement routine analysis for coliform bacteria. The limit for standard plate count (at 35°C after 48 hours) in the ODWOs is 500 counts/mL (based on a geometric mean of 5 or more samples). DWSP bacteriological analysis of treated and distributed water was limited to standard plate count.

Standard plate count (membrane filtration) exceeded the ODWO Aesthetic Objective of 500 counts/mL in 1 of 20 treated and distributed water samples with a maximum reported value of >2,400 counts/mL.

## INORGANIC & PHYSICAL

### CHEMISTRY (FIELD)

It is desirable that the temperature of drinking water be less than 15°C. The palatability of water is enhanced by its coolness. A temperature below 15°C will tend to reduce the growth of nuisance organisms and hence minimize associated taste, colour, odour and corrosion problems. The temperature of delivered water may increase in the distribution system due to the warming effect of soil in late summer and fall and/or as a result of higher temperatures in the source water.

Field temperature exceeded the ODWO Aesthetic Objective of 15°C in 11 of 23 treated and distributed water samples with a maximum reported value of 24.0°C.

### CHEMISTRY (LABORATORY)

The ODWOs indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters provides an acceptable balance between corrosion and encrustation. Water supplies with a hardness greater than 200 mg/L are considered poor and possess a tendency to form scale deposits and result in excessive soap consumption.

Hardness exceeded the ODWO Recommended Operational Guideline of 80-100 mg/L in all 25 treated and distributed water samples with a maximum reported value of 161.0 mg/L.

### METALS

At present, there is no evidence that aluminum is physiologically harmful and no health limit for drinking water has been specified. The measure of aluminum in treated water is important to measure the efficiency of the treatment process. The ODWOs indicate that a useful guideline is to maintain a residual below 100 ug/L as aluminum in the water leaving the plant to avoid problems in the distribution system.

Aluminum exceeded the ODWO Recommended Operational Guideline of 100 ug/L in 1 of 24 treated and distributed water samples with a maximum reported value of 130.0 ug/L.

## ORGANIC

### CHLOROAROMATICS

The results of the chloroaromatic scan showed that none were detected above trace levels.

### CHLOROPHENOLS

The results of the chlorophenol scan showed that none were detected.

### PESTICIDES AND PCB

The results of the pesticide and PCB scan showed that none were detected above trace levels.

### PHENOLICS

Phenolic compounds are present in the aquatic environment as a result of natural and/or industrial processes. The ODWOs have been revised to replace the aesthetic phenolic objective with objectives for specific phenols.

Phenolics were found at a positive level in 1 of the 12 treated and distributed water samples analyzed. The maximum observed level was 1.2 ug/L.

### POLYAROMATIC HYDROCARBONS

The results of the polyaromatic hydrocarbon scan showed that none were detected.

### SPECIFIC PESTICIDES

The results of the specific pesticide scan showed that none were detected.

### VOLATILES

The detection of benzene, ethylbenzene, toluene and xylenes at low, trace levels may be a laboratory artifact derived from the analytical methodology. Trace levels of styrene are considered to be laboratory artifacts resulting from the sample shipping containers.



Trihalomethanes (THMs) are produced during the water treatment process and will always occur in chlorinated waters. THMs are comprised of chloroform, chlorodibromomethane and dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs. Only total THM results are discussed. Starting in 1991, samples from the distribution system were quenched with sodium thiosulphate to stop the further production of THMs in the sample bottle. This provided a more representative estimation of the THMs consumed in tap water.

Total trihalomethanes were found at positive levels in all 25 treated and distributed water samples analyzed with a maximum level of 47.2 ug/L. This was below the ODWO Maximum Acceptable Concentration of 350 ug/L.

## RADIOLOGICAL

### RADIONUCLIDES

There are more than 200 radionuclides, some of which occur naturally and others which originate from the activities of society. The radionuclides currently of greater interest from a health view-point are tritium, strontium-90, iodine-131, cesium-137 and radium-226. The gross beta and gross alpha determinations are suitable for preliminary screening except for tritium which must be measured separately. Radionuclides are measured in becquerels per litre (Bq/L). No results were above the available guidelines.

## CONCLUSIONS

No known health related guidelines were exceeded.

The Amherstburg water supply system, for the sample years of 1991 and 1992, produced good quality water and this was maintained in the distribution system.

FIGURE 1

# AMHERSTBURG WATER TREATMENT PLANT

## SCHEMATIC

## CHARACTERISTICS

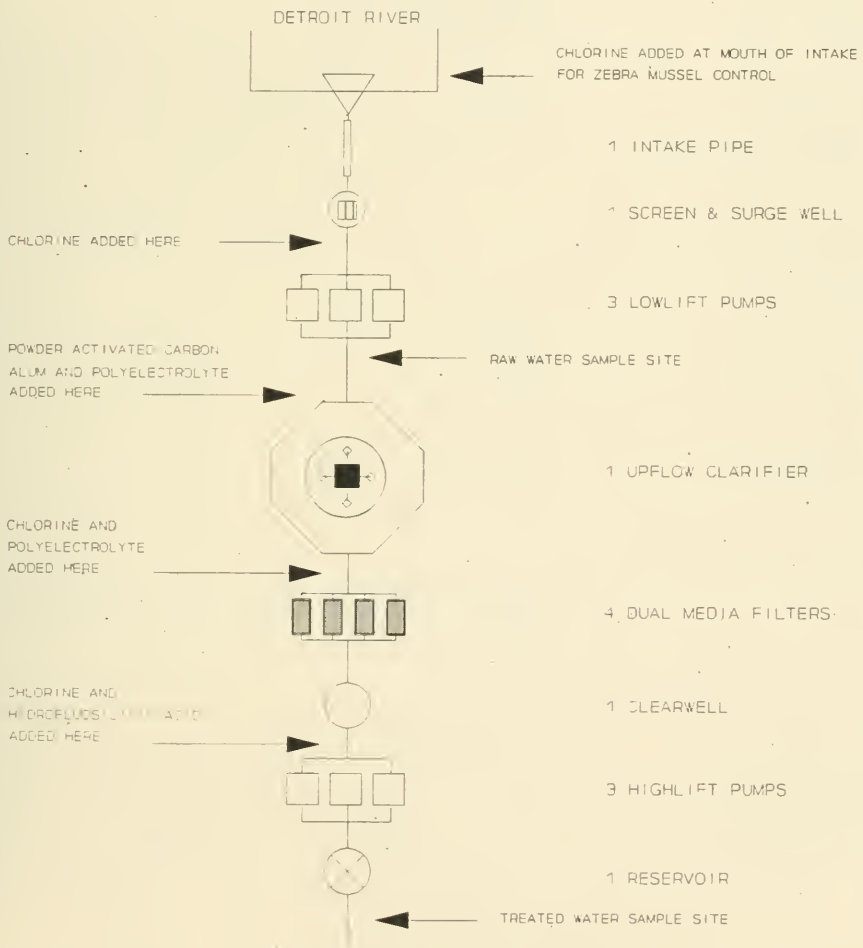


TABLE 1  
DRINKING WATER SURVEILLANCE PROGRAM  
PLANT GENERAL REPORT

PLANT NAME: AMHERSTBURG WSS  
WORKS #: 210000149  
UTM #: 173253004665675

DISTRICT: WINDSOR  
REGION: SOUTHWEST  
DISTRICT OFFICER: J. DRUMMOND

SUPERINTENDENT: LOUIS SINGER

ADDRESS: 415 FRONT RD. N.  
AMHERSTBURG, ONTARIO  
N9V 2V5  
519-736-5447

MUNICIPALITY: AMHERSTBURG  
AUTHORITY: PROVINCIAL

PLANT INFORMATION

PLANT VOLUME:	18.387	(X 1000 M3)
DESIGN CAPACITY:	18.180	(X 1000 M3/DAY)
RATED CAPACITY:	9.000	(X 1000 M3/DAY)

MUNICIPALITY	POPULATION
-----	-----
AMHERSTBURG	8,385
ANDERDON TWP	3,822
COLCHESTER TWP	1,944
MALDEN TWP	1,800



TABLE 2  
DRINKING WATER SURVEILLANCE PROGRAM  
IN-PLANT MONITORING

PARAMETER -----	LOCATION -----	FREQUENCY -----
ALUMINUM	FILTERED	EVERY 2 WEEKS
COMBINED CHLORINE RESIDUAL	FILTERED TREATED	DAILY READING DAILY READING
FREE CHLORINE RESIDUAL	FILTERED TREATED	EVERY 4 HOURS DAILY READING
TOTAL CHLORINE RESIDUAL	FILTERED TREATED	DAILY READING DAILY READING
FLUORIDE	TREATED	EVERY 6 HOURS
PH	RAW TREATED	DAILY READING DAILY READING
TEMPERATURE	RAW TREATED	DAILY READING DAILY READING
TURBIDITY	RAW CLARIFIED FILTERED TREATED	EVERY 4 HOURS EVERY 4 HOURS EVERY 4 HOURS EVERY 4 HOURS

TABLE 3.  
DRINKING WATER SURVEILLANCE PROGRAM AMHERSTBURG WSS SAMPLE DAY CONDITIONS  
AND TREATMENT CHEMICAL DOSAGES FOR 1991 AND 1992

DATE	DELAY * TIME(HRS) (1000MS)	PRE CHLORINATION CHLORINE	COAGULATION ALUM LIQUID	COAGULATION AID POLYELECTROLYTE	TASTE & ODOR ACTIVATED CARBON POWDER	FILTER AID POLYELECTROLYTE	POST CHLORINATION CHLORINE	FLUORIDATION HYDROFLUOSILICIC ACID
91 JAN 23 48.00	6.640	2.20	45.50	.18	6.13	.05	.35	.91
91 MAR 20 48.00	6.640	2.50	68.48	.18	5.98	.05	.35	.99
91 MAY 23 48.00	9.860	3.24	36.68	.38	4.24	.03	.56	1.10
91 JUL 17 48.00	13.180	2.76	40.50	.26	18.60	.03	.58	.97
91 SEP 18 48.00	8.270	3.40	33.30	.43	30.50	.04	.44	1.14
91 NOV 20 48.00	6.360	1.60	47.30	.52	12.50	.05	.44	.98
92 JAN 22 48.00	6.320	2.47	37.10	.26	7.30	.05	.56	.97
92 MAR 18 48.00	6.460	1.83	77.55	.26	7.10	.05	.48	1.02
92 MAY 21 48.00	8.960	1.73	41.40	.38	5.30	.04	.44	1.04
92 JUL 21 48.00	7.050	1.38	59.50	.45	6.50	.05	.43	1.17
92 SEP 24 48.00	7.140	4.73	89.30	.45	6.40	.04	.51	1.13
92 NOV 18 48.00	6.860	11.00	53.50	.47	6.60	.05	.38	.93

\* THE DELAY TIME BETWEEN THE RAW AND TREATED WATER SAMPLING, SHOULD ESTIMATE THE RETENTION TIME.

KEY TO TABLE 4 and 5

- A     ONTARIO DRINKING WATER OBJECTIVES (ODWO)  
      1. Maximum Acceptable Concentration (MAC)  
      1+. MAC for Total Trihalomethanes  
      2. Interim Maximum Acceptable Concentration (IMAC)  
      3. Aesthetic Objective (AO)  
      3\*. AO for Total Xylenes  
      4. Recommended Operational Guideline  
      5. Health Related Guidance Value
- B     HEALTH & WELFARE CANADA (H&W)  
      1. Maximum Acceptable Concentration (MAC)  
      2. Proposed MAC  
      3. Interim MAC  
      4. Aesthetic Objective (AO)
- C     WORLD HEALTH ORGANIZATION (WHO)  
      1. Guideline Value (GV)  
      2. Tentative GV  
      3. Aesthetic GV
- D     US ENVIRONMENTAL PROTECTION AGENCY (EPA)  
      1. Maximum Contaminant Level (MCL)  
      2. Suggested No-Adverse Effect Level (SNAEL)  
      3. Lifetime Health Advisory  
      4. EPA Ambient Water Quality Criteria
- F     EUROPEAN ECONOMIC COMMUNITY (EEC)  
      1. Health Related Guideline Level  
      2. Aesthetic Guideline Level  
      3. Maximum Admissable Concentration (MADC)
- G     CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE
- I     NEW YORK STATE AMBIENT WATER GUIDELINE
- N/A   NONE AVAILABLE

LABORATORY RESULTS, REMARK DESCRIPTIONS

. No Sample Taken

BDL Below Minimum Measurement Amount

<T Greater Than Detection Limit But Not Confident  
(SEE INTERPRETATION OF RESULTS ABOVE)

> Results Are Greater Than The Upper Limit

<=> Approximate Result

!48 No Data: Sample Age Exceeded 48 Hours

!AR No Data: No Numeric Results

!AW No Data: Analysis Withdrawn

!BT No Data: Sample Broken In Transit

!CS No Data: Contamination Suspected

!EF No Data: Laboratory Equipment Failure

!IR No Data: Insufficient Sample

!IS No Data: Insufficient Sample

!LA No Data: Laboratory Accident

!NP No Data: No Procedure

!NR No Data: Sample Not Received

!OP No Data: Obscured Plate

!PE No Data: Procedure Error: Sample Discarded

!PR No Data: Preservative Required

!QU No Data: Quality Control Unacceptable

!RE No Data: Received Empty

!RO No Data: No Numeric Results

!SM No Data: Sample Missing

!SS No Data: Sample Improperly Preserved

!U No Data: Sample Unsuitable For Analysis

!UB No Data: Bottle Broken

!UN No Data: Result Unreliable

!UR	No Data: Unpreserved Sample Required
A	Approximate Value
A3C	Approximate, Total Count Exceeded 300 Colonies
A>	Approximate Value, Exceeded Normal Range
APS	Additional Peak, Less Than, Not Priority Pollutant
ARO	Additional Information In Laboratory Report
CRO	Calculated Result Only
NAF	Not All Required Tests Found
RID	Ioncal Calculated on Incomplete Data Set
RMP	P and M-Xylene Not Separated
RRR	Result Obtained by Repeat Analysis
RRV	Rerun Verification
SFA	Sample Filtered: Filtrate Analyzed
SIL	Sample Incorrectly Labelled
SPS	Several Peaks, Small, Not Priority Pollutant
U48	Unreliable: Sample Age Exceeded 48 Hours
UAL	Unreliable: Sample Age Exceeded Limit
UAU	Unreliable: Sample Age Unknown
UCS	Unreliable: Contamination Suspected
WSD	Wrong Sample Description On Bottle

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG MSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
BACTERIOLOGICAL							
FECAL COLIFORM MF (CT/100ML)		DET'N LIMIT = 0	GUIDELINE = 0 (A1)				
1991 JAN	500	-	-	-	-	-	-
1991 MAR	520	-	-	-	-	-	-
1991 MAY	50 <=>	-	-	-	-	-	-
1991 JUL	28	-	-	-	-	-	-
1991 SEP	72	-	-	-	-	-	-
1991 NOV	600	-	-	-	-	-	-
1992 JAN	370	-	-	-	-	-	-
1992 MAR	540	-	-	-	-	-	-
1992 MAY	70 <=>	-	-	-	-	-	-
1992 JUL	70 <=>	-	-	-	-	-	-
1992 SEP	596	-	-	-	-	-	-
1992 NOV	1160	-	-	-	-	-	-
STANDRO PLATE CNT MF (CT/ML)							
1991 JAN	-	1 <=>	1 <=>	-	-	-	-
1991 MAR	-	1 <=>	-	-	-	-	-
1991 MAY	-	8 <=>	-	-	-	-	-
1991 JUL	-	10 <=>	-	-	-	-	-
1991 NOV	-	3 <=>	-	-	-	-	-
1992 JAN	-	2 <=>	-	-	-	-	-
1992 MAR	-	1 <=>	-	0 <=>	-	-	-
1992 JUL	-	5 <=>	-	-	-	5 <=>	-
1992 SEP	-	4 <=>	-	-	-	-	-
1992 NOV	-	2 <=>	-	-	-	0 <=>	-
TOTAL COLIFORM MF (CT/100ML)							
1991 JAN	6300 A3C	-	-	-	-	-	-
1991 MAR	5200 A3C	-	-	-	-	-	-
1991 MAY	1200	-	-	-	-	-	-
1991 JUL	220 A3C	-	-	-	-	-	-
1991 SEP	1000	-	-	-	-	-	-
1991 NOV	10600 A3C	-	-	-	-	-	-
1992 JAN	31000 A3C	-	-	-	-	-	-
1992 MAR	3600 A3C	-	-	-	-	-	-
1992 MAY	1800	-	-	-	-	-	-
1992 JUL	1600 A3C	-	-	-	-	-	-
1992 SEP	7300 A3C	-	-	-	-	-	-
1992 NOV	16200 A3C	-	-	-	-	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	GUIDELINE = 500 (A3)
BACTERIOLOGICAL				
STANDARD PLATE CNT MF (CT/ML)		DET'N LIMIT = 0		
1991 JAN		4 <=>		
1991 MAR	2 <=>			
1991 MAY	47			
1991 JUL		350		
1991 SEP	2400 >			
1992 JAN	2 <=>	7 <=>		
1992 MAY		5 <=>		
1992 SEP				

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
BACTERIOLOGICAL							
T COLIFORM BCKGRD MF (CT/100ML)		DET'N LIMIT = 0	GUIDELINE = N/A				
1991 JAN	00000 A3C	.	.	.	.	.	.
1991 MAR	42000 A3C	.	.	.	.	.	.
1991 MAY	18000	.	.	.	.	.	.
1991 JUL	16400 A3C	.	.	.	.	.	.
1991 SEP	19000	.	.	.	.	.	.
1991 NOV	10000 A3C	.	.	.	.	.	.
1992 JAN	70000 A3C	.	.	.	.	.	.
1992 MAR	34000 A3C	.	.	.	.	.	.
1992 MAY	23000	.	.	.	.	.	.
1992 JUL	55000 A3C	.	.	.	.	.	.
1992 SEP	40000 >	.	.	.	.	.	.
1992 NOV	40000 >	.	.	.	.	.	.



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (FIELD)							
FLO CHLORINE (COMB) (MG/L)		DET'N LIMIT = 0	GUIDELINE = N/A				
1991 JAN	.320	.200	.200				
1991 MAR	.300						
1991 MAY	.280						
1991 JUL	.320	.200	.200				
1991 SEP	.180						
1991 NOV	.250						
1992 JAN	.330						
1992 MAR	.300			.300	.200		
1992 MAY	.190						
1992 JUL	.240					.200	.100
1992 SEP	.260						
1992 NOV	.190					.200	.200
FLO CHLORINE FREE (MG/L)		DET'N LIMIT = 0	GUIDELINE = N/A				
1991 JAN	.830	.500	.300				
1991 MAR	.850						
1991 MAY	.810						
1991 JUL	.760	.100	.100				
1991 SEP	.810						
1991 NOV	.850						
1992 JAN	.820						
1992 MAR	.780			.400	.300		
1992 MAY	.800						
1992 JUL	.850					.500	.200
1992 SEP	.850						
1992 NOV	.820					.500	.100
FLO CHLORINE (TOTAL) (MG/L)		DET'N LIMIT = 0	GUIDELINE = N/A				
1991 JAN	1.150	.700	.500				
1991 MAR	1.150						
1991 MAY	1.090						
1991 JUL	1.080	.300	.300				
1991 SEP	.990						
1991 NOV	1.100						
1992 JAN	1.150						
1992 MAR	1.080			.700	.500		
1992 MAY	.990						
1992 JUL	1.090					.700	.300
1992 SEP	1.110						
1992 NOV	1.010					.700	.300

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	GUIDELINE = N/A
CHEMISTRY (FIELD)				
FLD CHLORINE (COMB) (MG/L)		DET'N LIMIT = 0		
1991 JAN		.300	.300	
1991 MAR	.200			
1991 MAY	.400			
1991 JUL	.300			
1991 SEP	.150			
1991 JAN	.210			
1992 JAN	.020			
1992 JAN	.150			
1992 MAY	.100			
1992 SEP	.200			
CHEMISTRY (TOTAL)				
FLD CHLORINE FREE (MG/L)		DET'N LIMIT = 0		
1991 JAN		.400	.300	
1991 MAR	.700			
1991 MAY	.500			
1991 JUL	.400			
1991 SEP	.150			
1991 JAN	.490			
1992 JAN	.700			
1992 MAY	.900			
1992 SEP	.300			
CHEMISTRY (TOTAL)				
FLD CHLORINE (TOTAL) (MG/L)		DET'N LIMIT = 0		
1991 JAN		.700	.600	
1991 MAR	.900			
1991 MAY	.900			
1991 JUL	.700			
1991 SEP	.300			
1991 JAN	.040			
1992 JAN	.300			
1992 MAY	1.000			
1992 SEP	.500			

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST. FREE FLOW	DIST. SYSTEM DALHOUSIE ST. STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (FIELD)							
FLO PH (DIMENSIONLESS)		DET'N LIMIT = N/A					
		GUIDELINE = 6.5-8.5 (A4)					
1991 JAN	8.100	7.000	7.200				
1991 MAR	8.200	7.100					
1991 MAY	8.100	6.900					
1991 JUL	8.200	7.000	7.400				
1991 SEP	8.100	7.100					
1991 NOV	8.100	6.900					
1992 JAN	8.000	7.000					
1992 MAR	8.000	6.800					
1992 MAY	8.100	7.000		7.000	7.100		
1992 JUL	8.100	7.000				7.200	7.100
1992 SEP	8.200	7.000				7.200	7.200
1992 NOV	8.200	6.900					
FLO TEMPERATURE (DEG.C)							
		DET'N LIMIT = N/A					
		GUIDELINE = 15 (A3)					
1991 JAN	2.000	3.000	7.000				
1991 MAR	2.000						
1991 MAY	15.000						
1991 JUL	24.000	23.000	24.000				
1991 SEP	21.000						
1991 NOV	5.000						
1992 JAN	2.000						
1992 MAR	3.000			4.000	19.000		
1992 MAY	15.000					18.000	18.500
1992 JUL	20.000						
1992 SEP	19.000					12.000	17.000
1992 NOV	5.000						
FLO TURBIDITY (FTU)							
		DET'N LIMIT = N/A					
		GUIDELINE = 1.0 (A1)					
1991 JAN	17.000	.060	2.200				
1991 MAR	16.800	.050					
1991 MAY	32.400	.030					
1991 JUL	10.900	.030	1.800				
1991 SEP	10.900	.090					
1991 NOV	5.650	.040					
1992 JAN	9.000	.060					
1992 MAR	37.200	.050		.140	1.220		
1992 MAY	16.800	.080					
1992 JUL	11.800	.080				.110	.150
1992 SEP	51.500	.120				.120	.170
1992 NOV	58.400	.070					

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

CHEMISTRY (FIELD)				DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5 (A4)	
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
FLO PH (OWNSLESS)							
1991 JAN	7.400	7.200	7.200	7.200	7.000	-	-
1991 MAR	7.200	7.100	7.100	7.300	7.100	-	-
1991 JUL	7.500	7.400	7.400	7.200	7.400	-	-
1991 SEP	7.200	7.200	7.200	7.400	7.400	-	-
1992 JAN	-	-	-	7.000	7.000	-	-
1992 MAY	-	-	-	-	-	-	-
1992 SEP	-	-	-	-	-	-	-
FLO TEMPERATURE (DEG.C)							
				DET'N LIMIT = N/A		GUIDELINE = 15 (A3)	
1991 JAN	6.000	15.000	15.000	3.000	4.000	-	-
1991 MAR	-	-	-	23.000	24.000	-	-
1991 JUL	2.000	2.000	2.000	17.000	17.000	-	-
1992 JAN	-	-	-	19.000	19.000	-	-
1992 MAY	-	-	-	-	-	-	-
1992 SEP	-	-	-	-	-	-	-
FLO TURBIDITY (FTU)							
				DET'N LIMIT = N/A		GUIDELINE = 1.0 (A1)	
1991 JAN	-	-	-	.160	.570	-	-
1991 MAR	.070	.260	.260	-	-	-	-
1991 MAY	.090	.240	.240	.060	.190	-	-
1991 JUL	-	-	-	-	-	-	-
1991 SEP	.100	.300	.300	-	-	-	-
1992 JAN	.200	.560	.560	.240	.410	-	-
1992 MAY	-	-	-	.210	.220	-	-
1992 SEP	-	-	-	-	-	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
ALKALINITY (MG/L)		DET'N LIMIT = 0.2		GUIDELINE = 30-500 (A4)			
1991 JAN	104.200	81.200		84.100			
1991 MAR	116.600	92.500					
1991 MAY	99.500	83.400					
1991 JUL	86.600	67.100	68.800				
1991 SEP	85.700	76.100					
1991 NOV	86.600	70.400					
1992 JAN	89.100	75.900					
1992 MAR	104.200	81.500		77.600	77.700		
1992 MAY	89.800	75.800					
1992 JUL	86.200	64.400				65.200	66.200
1992 SEP	91.900	66.300					
1992 NOV	90.800	66.300				67.400	68.700
CALCIUM (MG/L)							
		DET'N LIMIT = 0.20		GUIDELINE = 100 (F2)			
1991 JAN	40.800	37.000		38.100			
1991 MAR	45.000	46.200					
1991 MAY	36.800	37.600					
1991 JUL	30.400	30.800	31.400				
1991 SEP	29.400	30.000					
1991 NOV	28.800	29.100					
1992 JAN	32.600	33.900					
1992 MAR	41.700	44.700					
1992 MAY	30.200	31.200		43.100	40.400		
1992 JUL	28.850	28.250				30.850	31.000
1992 SEP	31.950	29.900					
1992 NOV	31.800	31.500				32.800	32.600
CYANIDE (MG/L)							
		DET'N LIMIT = 0.001		GUIDELINE = 0.2 (A1)			
16 SAMPLES	80L						
	80L						

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

ALKALINITY (MG/L)	CHEMISTRY (LABORATORY)				DET'N LIMIT = 0.2		GUIDELINE = 30-500 (A4)	
	DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
1991 JAN	99,000	97,300	88,500	90,800				
1991 MAR	83,500	81,800						
1991 MAY			70,500	71,100				
1991 JUL	76,100	75,600						
1991 SEP	76,800	76,900						
1992 JAN			79,600	83,800				
1992 MAY			68,900	70,300				
1992 SEP								
CALCIUM (MG/L)	CHEMISTRY (LABORATORY)				DET'N LIMIT = 0.20		GUIDELINE = 100 (F2)	
	DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
1991 JAN	47,600	47,400	42,600	41,600				
1991 MAR	38,400	36,000						
1991 MAY			33,000	32,200				
1991 JUL	31,000	30,000						
1991 SEP	33,700	33,800						
1992 JAN			32,900	34,800				
1992 MAY			32,350	31,950				
1992 SEP								

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
CHLORIDE (MG/L)		DET'N LIMIT = 0.20		GUIDELINE = 250 (A3)			
1991 JAN	15.900	16.300	16.700				
1991 MAR	22.000						
1991 MAY	11.500						
1991 JUL	11.100	15.400	14.400				
1991 SEP	13.400						
1991 NOV	10.400						
1992 JAN	21.700						
1992 MAR	22.800			22.100	22.100		
1992 MAY	10.000					12.500	12.900
1992 JUL	10.700					12.300	13.200
1992 SEP	14.100						
1992 NOV	13.000						
COLOUR (HZU)		DET'N LIMIT = 0.50		GUIDELINE = 5 (A3)			
1991 JAN	12.000	BDL	2.500				
1991 MAR	6.500	.500 <T					
1991 MAY	BDL	BDL					
1991 JUL	BDL	.500 <T	2.000				
1991 SEP	1.000 <T	BDL					
1991 NOV	BDL						
1992 JAN	1.000 <T	.500 <T					
1992 MAR	BDL	.500 <T		1.500	3.000		
1992 MAY	1.000	BDL				BDL	BDL
1992 JUL	1.000					.500 <T	BDL
1992 SEP	4.500	BDL					
1992 NOV	9.000	.500 <T					
CONDUCTIVITY (UMHO/CM)		DET'N LIMIT = 1.0		GUIDELINE = 400 (F2)			
1991 JAN	306	282	305				
1991 MAR	350	355					
1991 MAY	258	277					
1991 JUL	237	249	249				
1991 SEP	242	269					
1991 NOV	236	248					
1992 JAN	302	308					
1992 MAR	338	359					
1992 MAY	242	254	345	342			
1992 JUL	242	245					
1992 SEP	265	254				255	258
1992 NOV	254	258				267	267

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

CHEMISTRY (LABORATORY)				DET'N LIMIT = 0.20		GUIDELINE = 250 (A3)	
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
CHLORIDE (MG/L)							
1991 JAN	23,300	23,300	18,400	19,600			
1991 MAR	13,900	13,700					
1991 MAY							
1991 JUL			16,100	15,300			
1991 SEP	25,900	24,900					
1992 JAN	20,000	19,500					
1992 MAY			12,000	13,200			
1992 SEP			14,900	14,800			
COLOUR (NZU)				DET'N LIMIT = 0.50		GUIDELINE = 5 (A3)	
1991 JAN	BDL	BDL	BDL	2,500			
1991 MAR							
1991 MAY	.500 <T	.500 <T					
1991 JUL			BDL	BDL			
1991 SEP	BDL	1,000 <T					
1992 JAN	BDL	1,000 <T					
1992 MAY			BDL	BDL			
1992 SEP			BDL	BDL			
CONDUCTIVITY (UMHO/CM)				DET'N LIMIT = 1.0		GUIDELINE = 400 (F2)	
1991 JAN			317	324			
1991 MAR	365	365					
1991 MAY	273	266	257	256			
1991 JUL							
1991 SEP	292	287					
1992 JAN	299	296	259	274			
1992 MAY			265	264			
1992 SEP							



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM PORT ST FREE FLOW	DIST. SYSTEM PORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
DISS ORG CARBON (MG/L)		DET'N LIMIT = 0.10		GUIDELINE = 5.0 (A3)			
1991 JAN	2,800	1,500	1,600	-	-	-	-
1991 MAR	2,600	-	-	-	-	-	-
1991 MAY	1,900	-	-	-	-	-	-
1991 JUL	1,600	.700	.600	-	-	-	-
1991 SEP	1,800	-	-	-	-	-	-
1991 NOV	1,000	-	-	-	-	-	-
1992 JAN	1,400	-	-	-	-	-	-
1992 MAR	1,800	1,300	-	-	-	-	-
1992 MAY	2,800	1,300	1,300	-	-	-	-
1992 JUL	1,700	1,200	-	-	-	-	-
1992 SEP	1,900	.900	-	-	-	.900	1,000
1992 NOV	2,500	1,500	-	-	-	1,200	1,100
FLUORIDE (MG/L)		DET'N LIMIT = 0.01		GUIDELINE = 1.5 (A1)			
1991 JAN	.100	.800	.960	-	-	-	-
1991 MAR	.100	.920	-	-	-	-	-
1991 MAY	.080	1,120	1,160	-	-	-	-
1991 JUL	.100	-	-	-	-	-	-
1991 SEP	.120	-	-	-	-	-	-
1991 NOV	.080	1,020	-	-	-	-	-
1992 JAN	.100	1,160	-	-	-	-	-
1992 MAR	.100	1,000	-	-	-	-	-
1992 MAY	.120	1,260	-	-	-	-	-
1992 JUL	.100	1,280	-	-	-	1,220	1,200
1992 SEP	.120	1,260	-	-	-	1,000	1,020
1992 NOV	.100	1,040	-	-	-	-	-
HARDNESS (MG/L)		DET'N LIMIT = 0.5		GUIDELINE = 80-100 (A4)			
1991 JAN	141,700	128,800	133,000	-	-	-	-
1991 MAR	154,000	131,900	-	-	-	-	-
1991 MAY	128,000	130,000	-	-	-	-	-
1991 JUL	108,000	111,000	111,000	-	-	-	-
1991 SEP	105,600	107,300	-	-	-	-	-
1991 NOV	103,300	103,300	-	-	-	-	-
1992 JAN	117,500	121,300	-	-	-	-	-
1992 MAR	145,000	153,000	-	-	-	-	-
1992 MAY	108,720	111,300	-	-	-	-	-
1992 JUL	104,440	102,180	-	-	-	-	-
1992 SEP	115,310	107,440	-	-	-	108,990	109,810
1992 NOV	113,710	111,280	-	-	-	114,630	114,330

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING	
CHEMISTRY (LABORATORY)							
DISS ORG CARBON (MG/L)							
				DET'N LIMIT = 0.10		GUIDELINE = 5.0 (A3)	
1991 JAN	-	-	-	1.700	-	1.600	-
1991 MAR	2.200	-	1.800	-	-	-	-
1991 MAY	1.400	-	1.100	-	-	-	-
1991 JUL	-	-	-	.700	-	.600	-
1991 SEP	1.200	-	.900	-	-	-	-
1992 JAN	1.200	-	1.700	-	-	-	-
1992 MAY	-	-	-	1.100	-	1.300	-
1992 SEP	-	-	-	1.300	-	1.400	-
FLUORIDE (MG/L)							
				DET'N LIMIT = 0.01		GUIDELINE = 1.5 (A1)	
1991 JAN	-	-	-	.880	-	.880	-
1991 MAR	.960	-	.960	-	-	-	-
1991 MAY	1.100	-	1.000	-	-	-	-
1991 JUL	-	-	-	1.100	-	1.120	-
1991 SEP	1.240	-	1.200	-	-	-	-
1992 JAN	.980	-	.980	-	-	-	-
1992 MAY	-	-	-	1.260	-	1.260	-
1992 SEP	-	-	-	1.140	-	1.120	-
HARDNESS (MG/L)							
				DET'N LIMIT = 0.5		GUIDELINE = 80-100 (A4)	
1991 JAN	-	-	-	144.700	-	143.000	-
1991 MAR	161.000	-	161.000	-	-	-	-
1991 MAY	131.000	-	125.000	-	-	-	-
1991 JUL	-	-	-	114.000	-	112.000	-
1991 SEP	108.900	-	106.700	-	-	-	-
1992 JAN	119.100	-	119.000	-	-	-	-
1992 MAY	-	-	-	114.900	-	122.200	-
1992 SEP	-	-	-	113.740	-	112.560	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
IONCAL (OMNSLESS)		DET'N LIMIT = N/A		GUIDELINE = N/A			
1991 JAN	2.535	2.574		.942			
1991 MAR	1.145 NAF	.712					
1991 MAY	4.676 NAF	3.658 NAF					
1991 JUL	1.797	5.324 NAF					
1991 SEP	2.339 NAF	4.213	3.672 NAF	2.187			
1991 NOV	1.173 NAF	2.089 NAF					
1992 JAN	.419	.137 NAF					
1992 MAR	.725	3.118			1.560		
1992 MAY	2.710	.582					
1992 JUL	2.432	.580				2.233	1.955
1992 SEP	.033	1.060					
1992 NOV	.754	2.314				1.670	1.776
POTASSIUM (MG/L)							
		DET'N LIMIT = 0.01		GUIDELINE = 10 (F2)			
1991 JAN	1.900	1.310		1.430			
1991 MAR	1.750	1.650					
1991 MAY	1.200	1.150					
1991 JUL	.950	.950	1.000	1.000			
1991 SEP	1.040	1.060					
1991 NOV	1.000	.980					
1992 JAN	1.130	1.120					
1992 MAR	2.210	1.600			1.580		
1992 MAY	1.130	1.080					
1992 JUL	1.169	.996				1.086	1.222
1992 SEP	2.186	1.268					
1992 NOV	2.284	1.231				1.359	1.335
LANGELIERS INDEX (OMNSLESS)							
		DET'N LIMIT = N/A		GUIDELINE = N/A			
1991 JAN	.467	.066		.055			
1991 MAR	.604	.234					
1991 MAY	.331	-.054					
1991 JUL	.306	-.094	.026 NAF	.065			
1991 SEP	.265	.032					
1991 NOV	.163	-.267					
1992 JAN	.241	.088					
1992 MAR	.473	-.026			.079		
1992 MAY	.347	.143					
1992 JUL	.189	-.478				-.508	-.370
1992 SEP	.182	-.414					
1992 NOV	.169	-.283				-.142	-.236

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

CHEMISTRY (LABORATORY)				DET'N LIMIT = N/A		GUIDELINE = N/A	
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
IONCAL (DMSLESS )							
1991 JAN				2.287		.207	
1991 MAR	2.656 NAF	3.392 NAF					
1991 MAY	3.441 NAF	4.060 NAF					
1991 JUL				3.901 NAF		1.268 NAF	
1991 SEP	1.383 NAF	.041 NAF					
1992 JAN	4.050	3.730		.095		.666	
1992 MAY				2.761		2.301	
1992 SEP							
POTASSIUM (MG/L )							
				DET'N LIMIT = 0.01		GUIDELINE = 10 (F2)	
1991 JAN				1.520		1.520	
1991 MAR	1.650	1.700					
1991 MAY	1.150	1.050					
1991 JUL				1.000		1.000	
1991 SEP	1.200	.950					
1992 JAN	1.070	1.110					
1992 MAY				1.120		1.210	
1992 SEP				1.339		1.339	
LANCELIERS INDEX (DMSLESS )							
				DET'N LIMIT = N/A		GUIDELINE = N/A	
1991 JAN							
1991 MAR	.256	.356		.263		.264	
1991 MAY	.147	.025					
1991 JUL				.064 NAF		.048 NAF	
1991 SEP	.037	.112					
1992 JAN	.104	.127					
1992 MAY				.285		.306	
1992 SEP				.057		.084	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
MAGNESIUM (MG/L)		DET'N LIMIT = 0.1		GUIDELINE = 30.0 (F2)			
1991 JAN	9.700	8.850	9.300	9.200			
1991 MAR	10.300	10.200					
1991 MAY	8.800	8.700					
1991 JUL	7.800	7.800					
1991 SEP	7.800	7.850					
1991 NOV	7.600	7.450					
1992 JAN	8.900	8.900					
1992 MAR	9.900	9.920					
1992 MAY	8.090	8.100			9.850		
1992 JUL	7.860	7.700				7.770	7.860
1992 SEP	8.620	7.970					
1992 NOV	8.340	7.920				7.940	8.000
SODIUM (MG/L)		DET'N LIMIT = 0.20		GUIDELINE = 200 (A4)			
1991 JAN	7.600	7.300	7.400	7.600			
1991 MAR	12.200	11.800					
1991 MAY	6.800	7.200					
1991 JUL	6.800	7.600					
1991 SEP	7.900	11.900		7.000			
1991 NOV	6.500	6.500					
1992 JAN	13.200	12.500					
1992 MAR	11.200	10.900			11.700	11.000	
1992 MAY	5.640	5.910					
1992 JUL	6.620	6.280				6.600	6.900
1992 SEP	8.280	7.060					
1992 NOV	6.940	6.740				6.790	6.800
AMMONIUM TOTAL (MG/L)		DET'N LIMIT = 0.002		GUIDELINE = 0.05 (F2)			
1991 JAN	.024	BOL	.002 <T	.002 <T			
1991 MAR	.052	.002 <T					
1991 MAY	BOL	.026					
1991 JUL	.030	BOL	.004 <T	.006 <T			
1991 SEP	.024	BOL					
1991 NOV	.032	BOL					
1992 JAN	.058	BOL					
1992 MAR	.010	.006 <T					
1992 MAY	.008 <T	BOL		.004 <T	.004 <T		
1992 JUL	.030	BOL				BOL	.006 <T
1992 SEP	BOL	BOL					
1992 NOV	.020	.008 <T				.016	.012

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	GUIDELINE = 30.0 (F2)	
CHEMISTRY (LABORATORY)						
MAGNESIUM (MG/L)			DET'N LIMIT = 0.1			
1991 JAN	-	-	9.300	9.550	-	-
1991 MAR	10.300	10.400	-	-	-	-
1991 MAY	8.500	8.500	-	-	-	-
1991 JUL	-	-	7.600	7.700	-	-
1991 SEP	7.650	7.750	-	-	-	-
1992 JAN	8.500	8.450	-	-	-	-
1992 MAY	-	-	7.950	8.580	-	-
1992 SEP	-	-	8.020	7.970	-	-
SODIUM (MG/L)			DET'N LIMIT = 0.20			
1991 JAN	-	-	-	8.900	-	-
1991 MAR	12.000	12.000	8.100	-	-	-
1991 MAY	7.000	7.000	-	-	-	-
1991 JUL	-	-	8.200	7.600	-	-
1991 SEP	14.000	13.600	-	-	-	-
1992 JAN	12.000	11.000	-	-	-	-
1992 MAY	-	-	5.980	6.460	-	-
1992 SEP	-	-	7.760	7.820	-	-
AMMONIUM TOTAL (MG/L)			DET'N LIMIT = 0.002			
1991 JAN	-	-	-	-	-	-
1991 MAR	BDL	.002 <T	.002 <T	.024	-	-
1991 MAY	BDL	.376	-	-	-	-
1991 JUL	-	-	.006 <T	.016	-	-
1991 SEP	.002 <T	.012	-	-	-	-
1992 JAN	.002 <T	BDL	-	-	-	-
1992 MAY	-	-	.002 <T	.004 <T	-	-
1992 SEP	-	-	BDL	BDL	-	-

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHEMISTRY (LABORATORY)							
NITRITE (MG/L)		DET'N LIMIT = 0.001		GUIDELINE = 1.0 (A1)			
1991 JAN	.048	BDL		.001 <T			
1991 MAR	.023	BDL					
1991 MAY	.002 <T						
1991 JUL	.009	.001 <T		.002 <T			
1991 SEP	.008	BDL					
1991 NOV	.004 <T	BDL					
1992 JAN	.014	.001 <T					
1992 MAR	.059	.001 <T		.002 <T			
1992 MAY	.018	BDL					
1992 JUL	.019	BDL				BDL	.001 <T
1992 SEP	.035	BDL					
1992 NOV	.029	BDL				.003 <T	.002 <T
NITRATE (TOTAL) (MG/L)		DET'N LIMIT = 0.005		GUIDELINE = 10.0 (A1)			
1991 JAN	1.540	1.210		1.290			
1991 MAR	1.970						
1991 MAY	.020 <T						
1991 JUL	.325	.245		.245			
1991 SEP	.235						
1991 NOV	.295	.305					
1992 JAN	.790	.975					
1992 MAR	3.060	3.400		2.860	2.750		
1992 MAY	.695	.750					
1992 JUL	.760	.550				.710	.830
1992 SEP	.575	.390				.575	.570
1992 NOV	.645	.530					
NITROGEN TOT KJELD (MG/L)		DET'N LIMIT = 0.02		GUIDELINE = N/A			
1991 JAN	.490	.130					
1991 MAR	.360	.180		.170			
1991 MAY	.080 <T						
1991 JUL	.310	.070 <T		.120			
1991 SEP	.210	.080 <T					
1991 NOV	.220	.090 <T					
1992 JAN	.130	.130					
1992 MAR	.500	.180		.160	.300		
1992 MAY	.260	.100					
1992 JUL	.220	.070 <T				.080 <T	.110
1992 SEP	.500	.150					
1992 NOV	.425	.090 <T				.200	.100

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

CHEMISTRY (LABORATORY)				DET'N LIMIT = 0.001		GUIDELINE = 1.0 (A1)	
NITRITE (MG/L)							
1991 JAN				BDL		BDL	
1991 MAR	BDL	BDL					
1991 MAY	.002 <T	.001 <T					
1991 JUL		BDL		BDL		.001 <T	
1991 SEP	BDL	.001 <T					
1992 JAN	.001 <T	.004 <T					
1992 MAY				.002 <T		.004 <T	
1992 SEP				BDL		BDL	
NITRATE (TOTAL) (MG/L)				DET'N LIMIT = 0.005		GUIDELINE = 10.0 (A1)	
1991 JAN				1.530		1.500	
1991 MAR	2.050	2.050					
1991 MAY	1.970	.005 <T					
1991 JUL		.255				.250	
1991 SEP	.225	.225					
1992 JAN	.705	.665					
1992 MAY				.825		1.090	
1992 SEP				.420		.415	
NITROGEN TOT KJELD (MG/L)				DET'N LIMIT = 0.02		GUIDELINE = N/A	
1991 JAN				.160		.180	
1991 MAR	.190	.190					
1991 MAY	.100	.450					
1991 JUL		.090 <T		.090 <T		.090 <T	
1991 SEP	.080 <T	.090 <T					
1992 JAN	.110	.150					
1992 MAY				.110		.140	
1992 SEP				.160		.150	



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	CHEMISTRY (LABORATORY)				DET'N LIMIT = N/A				GUIDELINE = 6.5-8.5 (A4)			
		PH (DMNSLESS )	DIST. SYSTEM DALHOUSE ST FREE FLOW	DIST. SYSTEM DALHOUSE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING					
1991 JAN	8.280		8.020	7.990									
1991 MAR	8.330		8.050										
1991 MAY	8.190		7.880										
1991 JUL	8.300		8.010	8.150									
1991 SEP	8.280		8.100										
1991 NOV	8.180		7.840										
1992 JAN	8.220		8.120										
1992 MAR	8.280		7.860		8.000	8.120							
1992 MAY	8.330		8.190										
1992 JUL	8.210		7.680				7.610	7.740					
1992 SEP	8.140		7.710				7.940	7.840					
1992 NOV	8.130		7.820										
PHOSPHORUS FIL REACT (MG/L )			DET'N LIMIT = 0.0005				GUIDELINE = N/A						
1991 JAN	.020		BDL										
1991 MAR	.013		BDL										
1991 MAY	.000 <T		.002 <T										
1991 JUL	.007		.000 <T										
1991 SEP	.001 <T		.002 <T										
1991 NOV	.002 <T		.000 <T										
1992 JAN	.004		.001 <T										
1992 MAR	.014		.002 <T										
1992 MAY	.002 <T		.001 <T										
1992 JUL	.011		.001 <T										
1992 SEP	.027		.001 <T										
1992 NOV	.026		.001 <T										
PHOSPHORUS TOTAL (MG/L )			DET'N LIMIT = 0.002				GUIDELINE = 0.40 (F2)						
1991 JAN	.022		BDL										
1991 MAR	.034		BDL										
1991 MAY	.029		BDL										
1991 JUL	.017		.003 <T										
1991 SEP	.009 <T		BDL										
1991 NOV	.010		BDL										
1992 JAN	.052		.004 <T										
1992 MAR	.021		BDL										
1992 MAY	.021		.005 <T										
1992 JUL	.093		.003 <T										
1992 SEP	.085		BDL										
1992 NOV													

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

PH (DMMSLESS )	DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING		GUIDELINE = 6.5-8.5 (A4)	
	CHEMISTRY (LABORATORY)		DET'N LIMIT = N/A							
1991 JAN	-	-	-	-	8.130	-	8.130	-	-	-
1991 MAR	8.030	-	8.140	-	-	-	-	-	-	-
1991 MAY	8.070	-	7.980	-	-	-	-	-	-	-
1991 JUL	-	-	-	-	8.120	-	8.110	-	-	-
1991 SEP	8.100	-	8.190	-	-	-	-	-	-	-
1992 JAN	8.130	-	8.150	-	-	-	-	-	-	-
1992 MAY	-	-	-	-	8.290	-	8.270	-	-	-
1992 SEP	-	-	-	-	8.020	-	7.990	-	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	CHEMISTRY (LABORATORY)						DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
		RESIDUE FILTRATE (MG/L)	DET'N LIMIT = N/A		GUIDELINE = 500 (A3)		GUIDELINE = 500 (A3)						
SULPHATE (MG/L)													
1991 JAN	199,000 CRO	183,000 CRO	191,000 CRO	198,000 CRO	-	-	-	-	-	-	-	-	-
1991 MAR	227,000 CRO	231,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1991 MAY	168,000 CRO	180,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1991 JUL	154,000 CRO	162,000 CRO	164,000 CRO	162,000 CRO	-	-	-	-	-	-	-	-	-
1991 SEP	157,000 CRO	175,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1991 NOV	153,000 CRO	161,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1992 JAN	196,000 CRO	200,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1992 MAR	220,000 CRO	233,000 CRO	-	-	224,000 CRO	222,000 CRO	-	-	-	-	-	-	-
1992 MAY	157,000 CRO	165,000 CRO	-	-	-	-	-	-	-	166,000 CRO	-	168,000 CRO	-
1992 JUL	157,000 CRO	159,000 CRO	-	-	-	-	-	-	-	-	-	-	-
1992 SEP	172,000 CRO	165,000 CRO	-	-	-	-	-	-	-	-	-	174,000 CRO	174,000 CRO
1992 NOV	165,000 CRO	168,000 CRO	-	-	-	-	-	-	-	-	-	-	-
SULPHATE (MG/L)													
1991 JAN	23,680	34,580	36,500	36,150	-	-	-	-	-	-	-	-	-
1991 MAR	25,810	44,610	-	-	-	-	-	-	-	-	-	-	-
1991 MAY	20,870	34,380	-	-	-	-	-	-	-	-	-	-	-
1991 JUL	17,310	31,280	31,550	32,900	-	-	-	-	-	-	-	-	-
1991 SEP	15,130	23,960	-	-	-	-	-	-	-	-	-	-	-
1991 NOV	15,890	28,820	-	-	-	-	-	-	-	-	-	-	-
1992 JAN	23,700	33,370	-	-	-	-	-	-	-	-	-	-	-
1992 MAR	26,970	49,920	-	-	47,940	48,180	-	-	-	-	-	-	-
1992 MAY	18,520	29,920	-	-	-	-	-	-	-	35,190	-	35,090	-
1992 JUL	18,480	32,620	-	-	-	-	-	-	-	-	-	-	-
1992 SEP	21,330	34,120	-	-	-	-	-	-	-	40,470	-	37,640	-
1992 NOV	18,570	37,100	-	-	-	-	-	-	-	-	-	-	-
TURBIDITY (FTU)													
1991 JAN	22,000	.310	DET'N LIMIT = 0.05	GUIDELINE = 1.0 (A1)	3,300 RRV	-	-	-	-	-	-	-	-
1991 MAR	19,000	.150	.420	-	-	-	-	-	-	-	-	-	-
1991 MAY	31,000	.180 <T	-	-	-	-	-	-	-	-	-	-	-
1991 JUL	10,500	.110	.140	-	1,600 RRV	-	-	-	-	-	-	-	-
1991 SEP	10,900	.590	-	-	-	-	-	-	-	-	-	-	-
1991 NOV	5,500	.170 <T	-	-	-	-	-	-	-	-	-	-	-
1992 JAN	7,200	.280	-	-	-	-	-	-	-	-	-	-	-
1992 MAR	41,000	.140 <T	-	-	.150 <T	.890	-	-	-	-	-	-	-
1992 MAY	17,700	.230 <T	-	-	-	-	-	-	-	.220 <T	-	.280	-
1992 JUL	12,500	.230 <T	-	-	-	-	-	-	-	-	-	-	-
1992 SEP	71,000	.350	-	-	-	-	-	-	-	-	-	-	-
1992 NOV	87,000	.310	-	-	-	-	-	-	-	.310	-	.320	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
CHEMISTRY (LABORATORY)				
RESIDUE FILTRATE (MG/L)		DET'N LIMIT = N/A	GUIDELINE = 500 (A3)	
1991 JAN	-	206,000 CRO	211,000 CRO	-
1991 MAR	237,000 CRO	-	-	-
1991 MAY	177,000 CRO	-	-	-
1991 JUL	-	167,000 CRO	166,000 CRO	-
1991 SEP	190,000 CRO	-	-	-
1992 JAN	194,000 CRO	-	-	-
1992 MAY	-	168,000 CRO	178,000 CRO	-
1992 SEP	-	172,000 CRO	172,000 CRO	-
SULPHATE (MG/L)		DET'N LIMIT = 0.20	GUIDELINE = 500 (A3)	
1991 JAN	-	38,950	39,410	-
1991 MAR	43,520	-	-	-
1991 MAY	31,170	-	-	-
1991 JUL	-	32,310	33,320	-
1991 SEP	24,460	-	-	-
1992 JAN	31,990	-	-	-
1992 MAY	-	28,690	29,300	-
1992 SEP	-	35,870	34,230	-
TURBIDITY (FTU)		DET'N LIMIT = 0.05	GUIDELINE = 1.0 (A1)	
1991 JAN	-	.280	.970	-
1991 MAR	.100	-	-	-
1991 MAY	.570	-	-	-
1991 JUL	-	.160	.220	-
1991 SEP	.320	-	-	-
1992 JAN	.210 <T	-	-	-
1992 MAY	-	.370	.690	-
1992 SEP	-	.420	.470	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

METALS													
SILVER (UG/L)		DET'N LIMIT = 0.05				GUIDELINE = N/A				METALS			
49 SAMPLES	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL	BOL
ALUMINUM (UG/L)													
1991 JAN	210.000	16.000	15.000	19.000									
1991 MAR	200.000	18.000											
1991 MAY	320.000	47.000											
1991 JUL	150.000	88.000	30.000	41.000									
1991 SEP	130.000	130.000											
1991 NOV	70.000	21.000											
1992 JAN	100.000	20.000											
1992 MAR	370.000	17.000			16.000	21.000							
1992 MAY	190.000	52.000											
1992 JUL	140.000	49.000											
1992 SEP	560.000	53.000											
1992 NOV	680.000	23.000											
ARSENIC (UG/L)													
1991 JAN	.650 <T	.430 <T	.370 <T	.430 <T									
1991 MAR	.210 <T	BOL											
1991 MAY	.540 <T	.340 <T											
1991 JUL	.660 <T	.390 <T	.310 <T	.440 <T									
1991 SEP	.710 <T	.460 <T											
1991 NOV	.500 <T	.390 <T											
1992 JAN	.500 <T	.500 <T											
1992 MAR	.530 <T	.260 <T											
1992 MAY	.240 <T	BOL											
1992 JUL	.910 <T	.420 <T			.250 <T	.310 <T							
1992 SEP	1.000 <T	.460 <T											
1992 NOV	.710 <T	.160 <T											
										</			

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG MSS

METALS							
SILVER (UG/L)				DET'N LIMIT = 0.05	GUIDELINE = N/A		
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
	BDL	BDL	BDL	BDL	BDL		
ALUMINUM (UG/L)				DET'N LIMIT = 0.10	GUIDELINE = 100 (A4)		
1991 JAN				15.000	4.000		
1991 MAR	17.000	19.000					
1991 MAY	35.000	5.600					
1991 JUL				50.000	38.000		
1991 SEP	100.000	59.000					
1992 JAN	15M	18.000		48.000	45.000		
1992 MAY				51.000	44.000		
1992 SEP							
ARSENIC (UG/L)				DET'N LIMIT = 0.10	GUIDELINE = 25 (A1)		
1991 JAN				.400 <T	.240 <T		
1991 MAR	.320 <T	.320 <T					
1991 MAY	.420 <T	.240 <T					
1991 JUL				.370 <T	.200 <T		
1991 SEP	.430 <T	.210 <T					
1992 JAN	15M	.540 <T		BDL	BDL		
1992 MAY				.330 <T	.340 <T		
1992 SEP							

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
METALS							
BARIUM (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 1000 (A2)			
1991 JAN	20.000	16.000	16.000				
1991 MAR	20.000						
1991 MAY	19.000						
1991 JUL	15.000	20.000	20.000				
1991 SEP	16.000						
1991 NOV	16.000						
1992 JAN	17.000						
1992 MAR	23.000			21.000	21.000		
1992 MAY	17.000						
1992 JUL	16.000					17.000	18.000
1992 SEP	23.000					17.000	17.000
1992 NOV	23.000						
BORON (UG/L)		DET'N LIMIT = 2.00		GUIDELINE = 5000 (A1)			
1991 JAN	22.000		24.000		21.000		
1991 MAR	29.000						
1991 MAY	18.000 <T						
1991 JUL	13.000 <T		26.000		27.000		
1991 SEP	14.000 <T						
1991 NOV	21.000						
1992 JAN	17.000 <T						
1992 MAR	21.000						
1992 MAY	19.000 <T				18.000 <T		
1992 JUL	20.000 <T					19.000 <T	23.000
1992 SEP	30.000					25.000	27.000
1992 NOV	26.000						
BERYLLIUM (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 6800 (D4)			
1991 JAN	.060 <T						
1991 MAR	BDL	BDL	BDL				
1991 MAY	BDL						
1991 JUL	BDL	BDL	BDL				
1991 SEP	.120 <T						
1991 NOV	BDL						
1992 JAN	BDL						
1992 MAR	BDL						
1992 MAY	BDL						
1992 JUL	BDL						
1992 SEP	BDL						
1992 NOV	.070 <T						

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING		GUIDELINE = 1000 (A2)	
METALS		DET'N LIMIT = 0.05		DET'N LIMIT = 2.00		GUIDELINE = 5000 (A1)			
BARIUM (UG/L)									
1991 JAN	18.000	18.000	17.000	17.000	17.000	17.000	17.000		
1991 MAR	17.000	21.000	20.000	20.000	21.000	21.000	21.000		
1991 MAY	20.000	17.000	17.000	17.000	20.000	20.000	20.000		
1991 JUL	15M	17.000	18.000	18.000	18.000	18.000	18.000		
1991 SEP									
1992 JAN									
1992 MAY									
1992 SEP									
BORON (UG/L)		DET'N LIMIT = 0.05		DET'N LIMIT = 2.00		GUIDELINE = 5000 (A1)			
1991 JAN	20.000 <T	18.000 <T	21.000	21.000	32.000	32.000	32.000		
1991 MAR	18.000 <T	28.000	25.000	25.000	28.000	28.000	28.000		
1991 MAY	24.000	32.000	17.000 <T	17.000 <T	32.000	32.000	32.000		
1991 JUL	15M	20.000 <T	23.000	23.000	25.000	25.000	25.000		
1991 SEP									
1992 JAN									
1992 MAY									
1992 SEP									
BERYLLIUM (UG/L)		DET'N LIMIT = 0.05		DET'N LIMIT = 0.05		GUIDELINE = 6800 (D4)			
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1992 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL		
1992 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL		



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
METALS		DET'N LIMIT = 0.05					
CADMIUM (UG/L)		GUIDELINE = 5.0 (A1)					
1991 JAN	BOL	.070 <T					
1991 MAR	BOL		.070 <T				
1991 MAY	BOL						
1991 JUL	BOL		BOL				
1991 SEP	BOL						
1991 NOV	BOL						
1992 JAN	BOL						
1992 MAR	BOL			BOL			
1992 MAY	.060 <T						
1992 JUL	BOL					BOL	.070 <T
1992 SEP	BOL	.170 <T				BOL	
1992 NOV	BOL						BOL
COBALT (UG/L)		DET'N LIMIT = 0.02					
		GUIDELINE = N/A					
1991 JAN	.370 <T						
1991 MAR	.200 <T		.240 <T				
1991 MAY	.400 <T						
1991 JUL	.180 <T						
1991 SEP	.190 <T		.060 <T				
1991 NOV	.140 <T						
1992 JAN	.180 <T		.120 <T				
1992 MAR	.480 <T						
1992 MAY	.270 <T			.170 <T			
1992 JUL	.390 <T					.210 <T	.290 <T
1992 SEP	.470 <T					.130 <T	.130 <T
1992 NOV	.500 <T						
CHROMIUM (UG/L)		DET'N LIMIT = 0.50					
		GUIDELINE = 50.0 (A1)					
1991 JAN	2.700 <T						
1991 MAR	2.600 <T		2.300 <T		1.700 <T		
1991 MAY	3.200 <T						
1991 JUL	.770 <T		.560 <T		.550 <T		
1991 SEP	.590 <T						
1991 NOV	2.600 <T						
1992 JAN	.590 <T						
1992 MAR	1.100 <T						
1992 MAY	1.700 <T			BOL			
1992 JUL	.510 <T					.560 <T	BOL
1992 SEP	.990 <T						
1992 NOV	5.100					3.800 <T	3.900 <T

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG, WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
METALS				
CADMIUM (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 5.0 (A1)
1991 JAN				
1991 MAR	BDL	.070 <T	.400 <T	
1991 MAY	BDL			
1991 JUL	BDL	BDL	BDL	
1991 SEP	BDL			
1992 JAN	ISM			
1992 MAR		BDL	.080 <T	
1992 MAY		BDL	.070 <T	
1992 SEP				
COBALT (UG/L)		DET'N LIMIT = 0.02		GUIDELINE = N/A
1991 JAN				
1991 MAR	.090 <T	.280 <T	2.200	
1991 MAY	.070 <T			
1991 JUL	.690 <T			
1991 SEP	.130 <T	.130 <T	.130 <T	
1992 JAN	.400 <T			
1992 MAR	.120 <T			
1992 MAY	ISM	.110 <T	.910 <T	
1992 SEP		.180 <T	.290 <T	
CHROMIUM (UG/L)		DET'N LIMIT = 0.50		GUIDELINE = 50.0 (A1)
1991 JAN				
1991 MAR	1.900 <T	1.200 <T	1.800 <T	
1991 MAY	2.500 <T			
1991 JUL		.630 <T	.830 <T	
1991 SEP	.910 <T			
1992 JAN	ISM			
1992 MAR		BDL	.800 <T	
1992 SEP		3.000 <T	2.200 <T	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
METALS							
COPPER (UG/L)		DET'N LIMIT = 0.50		GUIDELINE = 1000 (A3)			
1991 JAN	4,200 <T	.670 <T	19,000	190,000	-	-	-
1991 MAR	3,200 <T	.900 <T	-	-	-	-	-
1991 MAY	5,500	1,000 <T	-	-	-	-	-
1991 JUL	3,700 <T	32,000	340,000	-	-	-	-
1991 SEP	4,400 <T	.710 <T	-	-	-	-	-
1991 NOV	1,600 <T	BOL	-	-	-	-	-
1992 JAN	3,500 <T	.560 <T	-	-	-	-	-
1992 MAR	5,000 <T	.740 <T	-	-	24,000	-	-
1992 MAY	4,100 <T	.900 <T	-	-	270,000	-	-
1992 JUL	5,400	.800 <T	-	-	-	130,000	1230,000
1992 SEP	7,200	1,000 <T	-	-	-	-	-
1992 NOV	5,600	.670 <T	-	-	-	64,000	200,000
IRON (UG/L)		DET'N LIMIT = 6.00		GUIDELINE = 300 (A3)			
1991 JAN	220,000	BOL	49,000 <T	350,000	-	-	-
1991 MAR	280,000	BOL	-	-	-	-	-
1991 MAY	660,000	BOL	-	-	-	-	-
1991 JUL	270,000	22,000 <T	59,000 <T	420,000	-	-	-
1991 SEP	220,000	11,000 <T	-	-	-	-	-
1991 NOV	110,000	BOL	-	-	-	-	-
1992 JAN	170,000	29,000 <T	-	-	-	-	-
1992 MAR	510,000	9,800 <T	-	-	47,000 <T	-	-
1992 MAY	320,000	10,000 <T	-	-	230,000	-	-
1992 JUL	210,000	BOL	-	-	-	6,100 <T	8,500 <T
1992 SEP	450,000	8,800 <T	-	-	-	-	-
1992 NOV	540,000	BOL	-	-	-	14,000 <T	16,000 <T
MERCURY (UG/L)		DET'N LIMIT = 0.02		GUIDELINE = 1.0 (A1)			
24 SAMPLES	BOL	BOL	-	-	-	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

METALS							
COPPER (UG/L)	DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	DET'N LIMIT = 0.50	GUIDELINE = 1000 (A3)	
1991 JAN	9.800	43.000	21.000	1000.000			
1991 MAR	21.000	1500.000					
1991 MAY			29.000	100.000			
1991 JUL	26.000	520.000					
1991 SEP	ISM	12.000					
1992 JAN			23.000	340.000			
1992 MAY			22.000	110.000			
1992 SEP							
				GUIDELINE = 300 (A3)			
IRON (UG/L)	DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	DET'N LIMIT = 6.00	GUIDELINE = 300 (A3)	
1991 JAN	BDL	BDL	BDL	93.000			
1991 MAR	6.200 <T	62.000					
1991 MAY			BDL	17.000 <T			
1991 JUL	13.000 <T	61.000					
1991 SEP	ISM	BDL					
1992 JAN			6.500 <T	51.000 <T			
1992 MAY			12.000 <T	13.000 <T			
1992 SEP							

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST. FREE FLOW	DIST. SYSTEM DALHOUSIE ST. STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
METALS							
MANGANESE (UG/L)		DET'N LIMIT = 0.05      GUIDELINE = 50.0 (A3)					
1991 JAN	6.500	4.500	5.300	-	-	-	-
1991 MAR	9.200	-	-	-	-	-	-
1991 MAY	20.000	-	-	-	-	-	-
1991 JUL	11.000	5.100	7.600	-	-	-	-
1991 SEP	11.000	.610	-	-	-	-	-
1991 NOV	4.200	.540	-	-	-	-	-
1992 JAN	5.100	1.100	-	-	-	-	-
1992 MAR	15.000	2.300	-	6.600	8.400	-	-
1992 MAY	13.000	.410 <T	-	-	-	.640	.770
1992 JUL	8.600	.270 <T	-	-	-	-	-
1992 SEP	20.000	.580	-	-	-	1.300	1.300
1992 NOV	13.000	1.300	-	-	-	-	-
MOLYBDENUM (UG/L)		DET'N LIMIT = 0.05      GUIDELINE = N/A					
1991 JAN	.550	.720	.710	-	-	-	-
1991 MAR	.390 <T	.730	-	-	-	-	-
1991 MAY	.270 <T	.720	-	-	-	-	-
1991 JUL	.500 <T	.680	.640	-	-	-	-
1991 SEP	.230 <T	.550	-	-	-	-	-
1991 NOV	.550	.620	-	-	-	-	-
1992 JAN	.610	.760	-	-	-	-	-
1992 MAR	.510	.990	-	.930	.860	-	-
1992 MAY	.690	.670	-	-	-	.800	.660
1992 JUL	.450 <T	.640	-	-	-	-	-
1992 SEP	.440 <T	.900	-	-	-	.700	.690
1992 NOV	.210 <T	.690	-	-	-	-	-
NICKEL (UG/L)		DET'N LIMIT = 0.20      GUIDELINE = 350 (D3)					
1991 JAN	.740 <T	.680 <T	2.900	-	-	-	-
1991 MAR	.680 <T	BOL	-	-	-	-	-
1991 MAY	1.400 <T	.350 <T	-	-	-	-	-
1991 JUL	.710 <T	.310 <T	4.000	-	-	-	-
1991 SEP	1.300 <T	.610 <T	-	-	-	-	-
1991 NOV	BOL	.480 <T	-	-	-	-	-
1992 JAN	.320 <T	BOL	-	-	-	-	-
1992 MAR	2.600	1.400 <T	-	1.900 <T	3.900	-	-
1992 MAY	BOL	BOL	-	-	-	-	-
1992 JUL	1.300 <T	.670 <T	-	-	-	1.100 <T	7.200
1992 SEP	1.900 <T	.830 <T	-	-	-	.700 <T	.680 <T
1992 NOV	1.600 <T	.560 <T	-	-	-	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

METALS				DET'N LIMIT = 0.05		GUIDELINE = 50.0 (A3)	
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING				
MANGANESE (UG/L)							
1991 JAN		1.100	67.000				
1991 MAR	1.000						
1991 MAY	.280 <T						
1991 JUL		.180 <T	5.000				
1991 SEP	.400 <T						
1992 JAN	ISM	.570					
1992 MAY		.250 <T	4.900				
1992 SEP		.730	1.100				
MOLYBDENUM (UG/L)				GUIDELINE = N/A			
1991 JAN		.840	.720				
1991 MAR	.870						
1991 MAY	.700						
1991 JUL		.540					
1991 SEP		.690	.670				
1992 JAN	.660						
1992 MAY	ISM	.760					
1992 SEP		.510	.500 <T				
		.840	.920				
NICKEL (UG/L)				GUIDELINE = 350 (B3)			
1991 JAN		.700 <T	21.000				
1991 MAR							
1991 MAY	.360 <T						
1991 JUL	.380 <T						
1991 SEP		1.000 <T	3.100				
1992 JAN	.800 <T						
1992 MAY	ISM	BOL					
1992 SEP		1.000 <T	.780 <T				
			12.000				

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

*TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
LEAD (UG/L)							
		DET'N LIMIT = 0.05		GUIDELINE = 10 (A1)			
1991 JAN	.730	.070 <T					
1991 MAR	.830	.320 <T	3.000				
1991 MAY	1.800	.090 <T					
1991 JUL	.730	.370 <T	4.900				
1991 SEP	.860	BDL					
1991 NOV	.310 <T						
1992 JAN	.400 <T	BDL					
1992 MAR	1.300	BDL		.280 <T	2.600		
1992 MAY	1.100	BDL					
1992 JUL	.920	BDL					
1992 SEP	1.500	.090 <T				5.400	17.000
1992 NOV	1.600	.100 <T				2.100	3.500
ANTIMONY (UG/L)							
		DET'N LIMIT = 0.05		GUIDELINE = 146 (D4)			
1991 JAN	.280 <T	.440 <T					
1991 MAR	.330 <T	.570	.580				
1991 MAY	.400 <T						
1991 JUL	.580	.670	.940				
1991 SEP	.410 <T						
1991 NOV	.500 <T	.380 <T					
1992 JAN	.490 <T	.480 <T					
1992 MAR	.260 <T	.340 <T		.530	.680		
1992 MAY	.400 <T	.500 <T					
1992 JUL	.380 <T	.420 <T				.520	.700
1992 SEP	.250 <T	.380 <T				.460 <T	.430 <T
1992 NOV	.220 <T	.450 <T					
SELENIUM (UG/L)							
		DET'N LIMIT = 1.00		GUIDELINE = 10 (A1)			
1991 JAN	BDL						
1991 MAR	BDL	2.000 <T	1.500 <T				
1991 MAY	BDL						
1991 JUL	BDL	BDL	BDL				
1991 SEP	BDL						
1991 NOV	BDL						
1992 JAN	BDL						
1992 MAR	BDL						
1992 MAY	BDL			BDL	BDL		
1992 JUL	BDL						
1992 SEP	BDL					BDL	BDL
1992 NOV	2.300 <T					1.300 <T	2.900 <T

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING		GUIDELINE = 10 (A1)	
LEAD (UG/L)		METALS		DET'N LIMIT = 0.05		DET'N LIMIT = 0.05		GUIDELINE = 10 (A1)	
1991 JAN									
1991 MAR		.240 <T			.070 <T		4.400		
1991 MAY		.230 <T	7.700						
1991 JUL			3.300		.240 <T		.960		
1991 SEP		1.500							
1992 JAN		FSM	5.300						
1992 MAY			.090 <T						
1992 SEP					.210 <T		6.400		
					.250 <T		1.300		
ANTHONY (UG/L)									
1991 JAN		.500 <T			.510		.520		
1991 MAR		.520	.720						
1991 MAY			.610						
1991 JUL					.650		.680		
1991 SEP		.590	.650						
1992 JAN		FSM	.540						
1992 MAY					.550		.690		
1992 SEP					.410 <T		.450 <T		
SELENIUM (UG/L)									
1991 JAN									
1991 MAR		1.300 <T			1.300 <T		1.300 <T		
1991 MAY		1.500 <T	1.100 <T						
1991 JUL			1.400 <T		BDL		BDL		
1991 SEP		BDL	BDL						
1992 JAN		FSM	BDL						
1992 MAY					BDL		BDL		
1992 SEP					BDL		BDL		



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
METALS							
STRONTIUM (UG/L)		DET*N LIMIT = 0.10      GUIDELINE = N/A					
1991 JAN	140.000	140.000	140.000	-	-	-	-
1991 MAR	150.000	-	-	-	-	-	-
1991 MAY	120.000	-	-	-	-	-	-
1991 JUL	110.000	120.000	-	-	-	-	-
1991 SEP	110.000	-	-	-	-	-	-
1991 NOV	120.000	-	-	-	-	-	-
1992 JAN	140.000	-	-	-	-	-	-
1992 MAR	170.000	-	-	160.000	170.000	-	-
1992 MAY	110.000	-	-	-	-	-	-
1992 JUL	140.000	-	-	-	-	130.000	140.000
1992 SEP	160.000	-	-	-	-	-	-
1992 NOV	130.000	-	-	-	-	130.000	130.000
TITANIUM (UG/L)		DET*N LIMIT = 0.50      GUIDELINE = N/A					
1991 JAN	9.500	6.000	7.300	-	-	-	-
1991 MAR	8.100	6.300	-	-	-	-	-
1991 MAY	4.200 <T	2.200 <T	-	-	-	-	-
1991 JUL	3.900 <T	3.400 <T	-	-	-	-	-
1991 SEP	1.800 <T	1.200 <T	3.400 <T	-	-	-	-
1991 NOV	2.100 <T	1.500 <T	-	-	-	-	-
1992 JAN	3.100 <T	1.700 <T	-	-	-	-	-
1992 MAR	6.600	5.400	-	5.000 <T	4.900 <T	-	-
1992 MAY	2.300 <T	2.100 <T	-	-	-	-	-
1992 JUL	5.200	4.000 <T	-	-	-	3.800 <T	3.900 <T
1992 SEP	4.300 <T	2.300 <T	-	-	-	-	-
1992 NOV	3.300 <T	1.800 <T	-	-	-	1.900 <T	1.700 <T
THALLIUM (UG/L)		DET*N LIMIT = 0.05      GUIDELINE = 13 (04)					
49 SAMPLES	BOL	BOL	BOL	BOL	BOL	BOL	BOL

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
METALS				
STRONTIUM (UG/L)				DET'N LIMIT = 0.10      GUIDELINE = N/A
1991 JAN	-	150.000	160.000	-
1991 MAR	160.000	-	-	-
1991 MAY	150.000	-	-	-
1991 JUL	120.000	120.000	120.000	-
1991 SEP	120.000	-	-	-
1992 JAN	130.000	-	-	-
1992 MAY	ISM	120.000	120.000	-
1992 SEP	-	140.000	140.000	-
TITANIUM (UG/L)				DET'N LIMIT = 0.50      GUIDELINE = N/A
1991 JAN	-	6.700	7.200	-
1991 MAR	6.300	-	-	-
1991 MAY	2.200 <T	2.700 <T	2.800 <T	-
1991 JUL	-	-	-	-
1991 SEP	1.100 <T	-	-	-
1992 JAN	1.800 <T	.740 <T	1.100 <T	-
1992 MAY	ISM	2.200 <T	2.200 <T	-
1992 SEP	-	-	-	-
THALLIUM (UG/L)				DET'N LIMIT = 0.05      GUIDELINE = 13 (04)
BOL	BOL	BOL	BOL	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST		DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST		DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW		DIST. SYSTEM MEDITERRANEAN STANDING
		FREE FLOW	STANDING		FREE FLOW	STANDING		FREE FLOW	STANDING	
METALS										
URANIUM (UG/L)		DET'N LIMIT = 0.05			GUIDELINE = 100 (A1)					
1991 JAN	.630	.150 <T	.170 <T	.160 <T	.	.	.	.	.	.
1991 MAR	.730	.150 <T	.	.	.	.	.	.	.	.
1991 MAY	.420 <T	.090 <T	.	.	.	.	.	.	.	.
1991 JUL	.200 <T	BDL	BDL	BDL	.	.	.	.	.	.
1991 SEP	.250 <T	.060 <T	.	.	.	.	.	.	.	.
1991 NOV	.260 <T	BDL	.	.	.	.	.	.	.	.
1992 JAN	.290 <T	.130 <T	.	.	.	.	.	.	.	.
1992 MAR	.680	.100 <T	.	.	.080 <T	.120 <T	.	.	.	.
1992 MAY	.290 <T	.100 <T	.	.	.	.	.	BDL	BDL	BDL
1992 JUL	.250 <T	BDL	.	.	.	.	.	BDL	BDL	BDL
1992 SEP	.430 <T	BDL	.	.	.	.	.	.	.	.
1992 NOV	.440 <T	BDL	.	.	.	.	.	.	.	.
VANADIUM (UG/L)		DET'N LIMIT = 0.05			GUIDELINE = N/A					
1991 JAN	.560	.470 <T	.410 <T	.650	.	.	.	.	.	.
1991 MAR	.480 <T	.440 <T	.	.	.	.	.	.	.	.
1991 MAY	.990	.520	.	.	.	.	.	.	.	.
1991 JUL	.420 <T	.630	.260 <T	.650	.	.	.	.	.	.
1991 SEP	.590	.490 <T	.	.	.	.	.	.	.	.
1991 NOV	.240 <T	.350 <T	.	.	.	.	.	.	.	.
1992 JAN	.290 <T	.230 <T	.	.	.	.	.	.	.	.
1992 MAR	.890	.490 <T	.	.	.290 <T	.400 <T	.	.	.	.
1992 MAY	BDL	BDL	.	.	.	.	.	.	.	.
1992 JUL	.640	.630	.	.	.	.	.	.680	.570	.
1992 SEP	1.300	.810	.	.	.	.	.	.630	.600	.
1992 NOV	1.200	.640	.	.	.	.	.	.	.	.
ZINC (UG/L)		DET'N LIMIT = 0.20			GUIDELINE = 5000 (A3)					
1991 JAN	5.000	2.400	14.000	140.000	.	.	.	.	.	.
1991 MAR	5.100	3.400	.	.	.	.	.	.	.	.
1991 MAY	2.400	2.400	.	.	.	.	.	.	.	.
1991 JUL	4.800	4.800	21.000	170.000	.	.	.	.	.	.
1991 SEP	3.200	3.200	.	.	.	.	.	.	.	.
1991 NOV	2.700	2.300	.	.	.	.	.	.	.	.
1992 JAN	3.900	1.900 <T	.	.	.	.	.	.	.	.
1992 MAR	13.000	2.400	.	.	18.000	180.000	.	.	.	.
1992 MAY	5.500	5.500	.	.	.	.	.	.	.	.
1992 JUL	4.600	2.200	.	.	.	.	.	7.600	67.000	.
1992 SEP	9.900	3.300	.	.	.	.	.	.	.	.
1992 NOV	7.300	.990 <T	.	.	.	.	.	2.400	4.200	.

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING	
METALS		DET'N LIMIT = 0.05		DET'N LIMIT = 0.05		GUIDELINE = 100 (A1)	
URANIUM (UG/L)							
1991 JAN				.130 <T		BDL	
1991 MAR	.150 <T		.110 <T				
1991 MAY	.070 <T		BDL				
1991 JUL				BDL		BDL	
1991 SEP	.070 <T		BDL				
1992 JAN	ISM		.100 <T				
1992 MAY				.090 <T		.090 <T	
1992 SEP				BDL		BDL	
VANADIUM (UG/L)		DET'N LIMIT = 0.05		DET'N LIMIT = 0.05		GUIDELINE = N/A	
1991 JAN							
1991 MAR	.390 <T		.420 <T	.520		.080 <T	
1991 MAY	.560		.130 <T				
1991 JUL				.580		.380 <T	
1991 SEP	.550		.220 <T				
1992 JAN	ISM		.200 <T				
1992 MAY				BDL		BDL	
1992 SEP				.790		.720	
ZINC (UG/L)		DET'N LIMIT = 0.20		DET'N LIMIT = 0.20		GUIDELINE = 5000 (A3)	
1991 JAN							
1991 MAR	5.400		12.000	9.200		660.000	
1991 MAY	3.600		15.000				
1991 JUL				8.800		64.000	
1991 SEP	3.400		30.000				
1992 JAN	ISM		3.300				
1992 MAY				14.000		15.000	
1992 SEP				8.800		300.000	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

CHLOROAROMATICS							
HEXACHLOROBUTADIENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = 450 (D4)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	IAW					
1991 SEP	IAW						
1991 NOV	BDL	2,000 <T					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL		BDL			
1992 MAY	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL				BDL	
-----							
123-TRICHLOROBENZENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
-----							
1234-TETChLOROBENZENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
-----							
1235-TETChLOROBENZENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
-----							
124-TRICHLOROBENZENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = 10000 (I)			
28 SAMPLES	BDL	BDL		BDL		BDL	
-----							
1245-TETChLOROBENZENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = 38000 (D4)			
28 SAMPLES	BDL	BDL		BDL		BDL	
-----							
135-TRICHLOROBENZENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
CHLOROAROMATICS				
HEXACHLOROBUTADIENE (NG/L)				DET'N LIMIT = 1.000      GUIDELINE = 450 (04)
1991 JAN		BDL		
1991 MAR		BDL		
1991 MAY		BDL		
1991 JUL		BDL		
1991 SEP		BDL		
1992 JAN		BDL		
1992 MAY		BDL		
1992 SEP		BDL		
123-TRICHLOROBENZENE (NG/L)				DET'N LIMIT = 5.000      GUIDELINE = N/A
BDL		BDL		
1234-TETCHLOROBENZENE (NG/L)				DET'N LIMIT = 1.000      GUIDELINE = N/A
BDL		BDL		
1235-TETCHLOROBENZENE (NG/L)				DET'N LIMIT = 1.000      GUIDELINE = N/A
BDL		BDL		
124-TRICHLOROBENZENE (NG/L)				DET'N LIMIT = 5.000      GUIDELINE = 10000 (1)
BDL		BDL		
1245-TETCHLOROBENZENE (NG/L)				DET'N LIMIT = 1.000      GUIDELINE = 38000 (04)
BDL		BDL		
135-TRICHLOROBENZENE (NG/L)				DET'N LIMIT = 5.000      GUIDELINE = N/A
BDL		BDL		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHLOROAROMATICS							
HEXACHLOROBENZENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = 10 (C1)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	2,000 <T	BDL					
1991 JUL	BDL	IAW					
1991 SEP	IAW	IAW					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL					
1992 MAY	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					BDL
HEXACHLOROETHANE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = 1900 (D4)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	IAW					
1991 SEP	IAW	IAW					
1991 NOV	BDL	BDL					
1992 JAN	BDL	2,000 <T					
1992 MAR	1,000 <T	BDL					
1992 MAY	BDL	4,000 <T					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					2,000 <T
OCTACHLOROSTYRENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL					BDL
PENTACHLOROBENZENE (NG/L)		DET'N LIMIT = 1,000		GUIDELINE = 74000 (D4)			
28 SAMPLES	BDL	BDL					BDL
236-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL					BDL
245-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL					BDL
26A-TRICHLOROTOLUENE (NG/L)		DET'N LIMIT = 5,000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL					BDL

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
CHLOROAROMATICS				
HEXACHLOROBENZENE (NG/L)		DET'N LIMIT = 1,000	GUIDELINE = 10 (C1)	
1991 JAN		BDL		
1991 MAR				
1991 MAY				
1991 JUL		1AW		
1991 SEP				
1992 JAN				
1992 MAY		BDL		
1992 SEP		BDL		
HEXACHLOROETHANE (NG/L)				
		DET'N LIMIT = 1,000	GUIDELINE = 1900 (D4)	
1991 JAN		BDL		
1991 MAR				
1991 MAY				
1991 JUL		1AW		
1991 SEP				
1992 JAN				
1992 MAY		2,000 <T		
1992 SEP		3,000 <T		
OCTACHLOROSTYRENE (NG/L)				
		DET'N LIMIT = 1,000	GUIDELINE = N/A	
BDL		BDL		
PENTACHLOROBENZENE (NG/L)				
		DET'N LIMIT = 1,000	GUIDELINE = 74000 (D4)	
BDL		BDL		
236-TRICHLOROTOLUENE (NG/L)				
		DET'N LIMIT = 5,000	GUIDELINE = N/A	
BDL		BDL		
245-TRICHLOROTOLUENE (NG/L)				
		DET'N LIMIT = 5,000	GUIDELINE = N/A	
BDL		BDL		
26A-TRICHLOROTOLUENE (NG/L)				
		DET'N LIMIT = 5,000	GUIDELINE = N/A	
BDL		BDL		



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
CHLOROPHENOLS							
234-TRICHLOROPHENOL (NG/L)		DET'N LIMIT = 100.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
2345-TETCHLOROPHENOL (NG/L)		DET'N LIMIT = 20.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
2356-TETCHLOROPHENOL (NG/L)		DET'N LIMIT = 10.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
245-TRICHLOROPHENOL (NG/L)		DET'N LIMIT = 100.0		GUIDELINE = 2600000 (04)			
6 SAMPLES	BDL						
246-TRICHLOROPHENOL (NG/L)		DET'N LIMIT = 20.0		GUIDELINE = 5000 (A1)			
6 SAMPLES	BDL						
PENTACHLOROPHENOL (NG/L)		DET'N LIMIT = 10.00		GUIDELINE = 60000 (A1)			
6 SAMPLES	BDL						

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
PESTICIDES AND PCB							
ALDRIN (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 700 (A1)			
28 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	
ALPHA BHC (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 700 (G)			
1991 JAN	1.000 <T	BDL					
1991 MAR	2.000 <T	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	!AW					
1991 SEP	!AW	!AW					
1991 NOV	BDL	BDL					
1992 JAN	1.000 <T	BDL					
1992 MAR	2.000 <T	BDL		BDL			
1992 MAY	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL				BDL	
BETA BHC (NG/L)		DET'N LIMIT = 1.00		GUIDELINE = 300 (G)			
28 SAMPLES	BDL	BDL		BDL		BDL	
LINDANE (GAMMA BHC) (NG/L)		DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	!AW					
1991 SEP	!AW	!AW					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	1.000 <T	BDL					
1992 MAY	BDL	BDL		BDL			
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL				BDL	
ALPHA CHLORDANE (NG/L)		DET'N LIMIT = 2.000		GUIDELINE = 7000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	
GAMMA CHLORDANE (NG/L)		DET'N LIMIT = 2.00		GUIDELINE = 7000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	
DIELDRIN (NG/L)		DET'N LIMIT = 2.00		GUIDELINE = 700 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

PESTICIDES AND PCB							
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	ALDRIN (NG/L)	DET'N LIMIT = 1.000	GUIDELINE = 700 (A1)	
				BDL			
ALPHA BHC (NG/L)				BDL	DET'N LIMIT = 1.000	GUIDELINE = 700 (G)	
1991 JAN							
1991 MAR				BDL			
1991 MAY				BDL			
1991 JUL							
1991 SEP				IAW			
1992 JAN				BDL			
1992 MAY							
1992 SEP				BDL			
BETA BHC (NG/L)					DET'N LIMIT = 1.00	GUIDELINE = 300 (G)	
				BDL			
LINDANE (GAMMA BHC) (NG/L)					DET'N LIMIT = 1.000	GUIDELINE = 4000 (A1)	
1991 JAN							
1991 MAR				BDL			
1991 MAY							
1991 JUL				IAW			
1991 SEP							
1992 JAN				BDL			
1992 MAY							
1992 SEP				BDL			
ALPHA CHLORDANE (NG/L)					DET'N LIMIT = 2.000	GUIDELINE = 7000 (A1)	
				BDL			
GAMMA CHLORDANE (NG/L)					DET'N LIMIT = 2.00	GUIDELINE = 7000 (A1)	
				BDL			
DIELDRIN (NG/L)					DET'N LIMIT = 2.00	GUIDELINE = 700 (A1)	
				BDL			

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
PESTICIDES AND PCB							
METHOXYCHLOR (NG/L )		DET'N LIMIT = 5.0		GUIDELINE = 900000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	
ENDOSULFAN 1 (NG/L )		DET'N LIMIT = 2.00		GUIDELINE = 74000 (D4)			
28 SAMPLES	BDL	BDL		BDL		BDL	
ENDOSULFAN II (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = 74000 (D4)			
28 SAMPLES	BDL	BDL		BDL		BDL	
ENDRIN (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = 1600 (D3)			
28 SAMPLES	BDL	BDL		BDL		BDL	
ENDOSULFAN SULPHATE (NG/L )		DET'N LIMIT = 5.00		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
HEPTACHLOR EPOXIDE (NG/L )		DET'N LIMIT = 1.000		GUIDELINE = 3000 (A1)			
20 SAMPLES	BDL	BDL		100		BDL	
HEPTACHLOR (NG/L )		DET'N LIMIT = 1.000		GUIDELINE = 3000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	
MIREX (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
OXYCHLORDANE (NG/L )		DET'N LIMIT = 2.000		GUIDELINE = N/A			
28 SAMPLES	BDL	BDL		BDL		BDL	
O,P-DDT (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	
PCB (NG/L )		DET'N LIMIT = 20.00		GUIDELINE = 3000 (A2)			
28 SAMPLES	BDL	BDL		BDL		BDL	
P,P'-DDD (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
28 SAMPLES	BDL	BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
PESTICIDES AND PCB				
METHOXYCHLOR (NG/L )		DET'N LIMIT = 5.0	GUIDELINE = 900000 (A1)	
BDL		BDL		
ENDOSULFAN 1 (NG/L )		DET'N LIMIT = 2.00	GUIDELINE = 74000 (D4)	
BDL		BDL		
ENDOSULFAN 11 (NG/L )		DET'N LIMIT = 5.000	GUIDELINE = 74000 (D4)	
BDL		BDL		
ENDRIN (NG/L )		DET'N LIMIT = 5.000	GUIDELINE = 1600 (D3)	
BDL		BDL		
ENDOSULFAN SULPHATE (NG/L )		DET'N LIMIT = 5.00	GUIDELINE = N/A	
BDL		BDL		
HEPTACHLOR EPOXIDE (NG/L )		DET'N LIMIT = 1.000	GUIDELINE = 3000 (A1)	
BDL		BDL		
HEPTACHLOR (NG/L )		DET'N LIMIT = 1.000	GUIDELINE = 3000 (A1)	
BDL		BDL		
MIREX (NG/L )		DET'N LIMIT = 5.000	GUIDELINE = N/A	
BDL		BDL		
OXYCHLORDANE (NG/L )		DET'N LIMIT = 2.000	GUIDELINE = N/A	
BDL		BDL		
O,P-DDT (NG/L )		DET'N LIMIT = 5.000	GUIDELINE = 30000 (A1)	
BDL		BDL		
PCB (NG/L )		DET'N LIMIT = 20.00	GUIDELINE = 3000 (A2)	
BDL		BDL		
P,P-DDD (NG/L )		DET'N LIMIT = 5.000	GUIDELINE = 30000 (A1)	
BDL		BDL		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
PESTICIDES AND PCB							
P, P-DDE (NG/L )		DET'N LIMIT = 1.000		GUIDELINE = 30000 (A1)			
28 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
P, P-DDT (NG/L )		DET'N LIMIT = 5.000		GUIDELINE = 30000 (A1)			
28 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TOXAPHENE (NG/L )		DET'N LIMIT = 500.0		GUIDELINE = 5000 (A1)			
21 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
AMETRINE (NG/L )		DET'N LIMIT = 50.0		GUIDELINE = 300000 (D3)			
18 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
ATRAZINE (NG/L )		DET'N LIMIT = 50.0		GUIDELINE = 60000 (A2)			
1991 JAN	280.000 <T	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	11A	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	80.000 <T	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 SEP	1AW	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	90.000 <T	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 SEP	150.000 <T	BDL	BDL	BDL	BDL	BDL	BDL
1992 NOV	110.000 <T	BDL	BDL	BDL	BDL	BDL	BDL
ATRATONE (NG/L )		DET'N LIMIT = 50.0		GUIDELINE = N/A			
18 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CYANAZINE (BLADEX) (NG/L )		DET'N LIMIT = 100.0		GUIDELINE = 10000 (A2)			
17 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
DESETHYL ATRAZINE (NG/L )		DET'N LIMIT = 200.0		GUIDELINE = 60000 (A2)			
17 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
DESETHYL SIMAZINE (NG/L )		DET'N LIMIT = 200.0		GUIDELINE = 10000 (A2)			
18 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG USS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING
PESTICIDES AND PCB			
P,P-DDE (NG/L)		DET'N LIMIT = 1.000	GUIDELINE = 30000 (A1)
	BDL	BDL	
P,P-DDT (NG/L)		DET'N LIMIT = 5.000	GUIDELINE = 30000 (A1)
	BDL	BDL	
TOXAPHENE (NG/L)		DET'N LIMIT = 500.0	GUIDELINE = 5000 (A1)
	BDL	BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
PESTICIDES AND PCB							
PROMETONE (NG/L )		DET'N LIMIT = 50.000		GUIDELINE = 52500 (03)			
17 SAMPLES	BDL						
PROPANE (NG/L )							
	BDL	DET'N LIMIT = 50.000		GUIDELINE = 70000 (03)			
17 SAMPLES	BDL						
PROMETRYNE (NG/L )		DET'N LIMIT = 50.000		GUIDELINE = 1000 (A2)			
18 SAMPLES	BDL						
METRIBUTAZIN (SENCOR) (NG/L )							
	BDL	DET'N LIMIT = 100.0		GUIDELINE = 80000 (A1)			
17 SAMPLES	BDL						
SIMAZINE (NG/L )		DET'N LIMIT = 50.00		GUIDELINE = 10000 (A2)			
17 SAMPLES	BDL						
ALACHLOR (CLASSO) (NG/L )							
	BDL	DET'N LIMIT = 500.0		GUIDELINE = 5000 (A2)			
17 SAMPLES	BDL						
METOLACHLOR (NG/L )							
	BDL	DET'N LIMIT = 500.0		GUIDELINE = 50000 (A2)			
18 SAMPLES	BDL						
HEXACYCLOPENTADIEN (NG/L )							
	BDL	DET'N LIMIT = 5.00		GUIDELINE = 206000 (04)			
1991 JAN	BDL						
1991 MAR	BDL						
1991 MAY	BDL						
1991 JUL	BDL						
1991 SEP	BDL						
1991 NOV	BDL						
1992 JAN	BDL						
1992 MAR	BDL						
1992 MAY	BDL						
1992 SEP	BDL						
1992 NOV	BDL						



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	GUIDELINE = 206000 (04)
PESTICIDES AND PCB				
1991 JAN	BDL	25,000 <T		
1991 MAR	BDL			
1991 MAY	BDL			
1991 JUL		1AW		
1991 SEP	1AW			
1992 JAN	BDL			
1992 MAY		1QU		
1992 SEP		1QU		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST		DIST. SYSTEM DALHOUSIE ST		DIST. SYSTEM PORT ST		DIST. SYSTEM MEDITERRANEAN		DIST. SYSTEM MEDITERRANEAN	
		FREE FLOW	STANDING	FREE FLOW	STANDING	FREE FLOW	STANDING	FREE FLOW	STANDING	FREE FLOW	STANDING
PHENOLICS (UG/L)		DET'N LIMIT =		GUIDELINE = N/A							
1991 JAN	.600 <T	BDL	.	.	.	.	.	.	.	.	.
1991 MAR	BDL	.400 <T	.	.	.	.	.	.	.	.	.
1991 MAY	.400 <T	1,200	.	.	.	.	.	.	.	.	.
1991 JUL	BDL	BDL	.	.	.	.	.	.	.	.	.
1991 SEP	BDL	BDL	.	.	.	.	.	.	.	.	.
1991 NOV	.600 <T	.400 <T	.	.	.	.	.	.	.	.	.
1992 JAN	.400 <T	BDL	.	.	.	.	.	.	.	.	.
1992 MAR	BDL	.400 <T	.	.	.	.	.	.	.	.	.
1992 MAY	1,000 <T	.400 <T	.	.	.	.	.	.	.	.	.
1992 JUL	.400 <T	BDL	.	.	.	.	.	.	.	.	.
1992 SEP	BDL	BDL	.	.	.	.	.	.	.	.	.
1992 NOV	.400 <T	.600 <T	.	.	.	.	.	.	.	.	.

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
POLYAROMATIC HYDROCARBONS							
PHENANTHRENE (NG/L)	)	DET'N LIMIT = 10.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
ANTHRACENE (NG/L)	)	DET'N LIMIT = 1.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
FLUORANTHRENE (NG/L)	)	DET'N LIMIT = 20.0		GUIDELINE = 42000 (D4)			
12 SAMPLES	BDL	BDL					
PYRENE (NG/L)	)	DET'N LIMIT = 20.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(A)ANTHRACENE (NG/L)	)	DET'N LIMIT = 20.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
CHRYSENE (NG/L)	)	DET'N LIMIT = 50.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
DIMETH. BENZ(A)ANTHR (NG/L)	)	DET'N LIMIT = 5.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(E) PYRENE (NG/L)	)	DET'N LIMIT = 50.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(B) FLUORANTHRENE (NG/L)	)	DET'N LIMIT = 10.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
PERYLENE (NG/L)	)	DET'N LIMIT = 10.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(K) FLUORANTHRENE (NG/L)	)	DET'N LIMIT = 1.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(A) PYRENE (NG/L)	)	DET'N LIMIT = 5.0		GUIDELINE = 10 (A1)			
12 SAMPLES	BDL	BDL					

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

POLYAROMATIC HYDROCARBONS				
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE STANDING		
PHENANTHRENE (NG/L)		DET'N LIMIT = 10.0	GUIDELINE = N/A	
	BDL			
ANTHRACENE (NG/L)		DET'N LIMIT = 1.0	GUIDELINE = N/A	
	BDL			
FLUORANTHENE (NG/L)		DET'N LIMIT = 20.0	GUIDELINE = 42000 (04)	
	BDL			
PYRENE (NG/L)		DET'N LIMIT = 20.0	GUIDELINE = N/A	
	BDL			
BENZO(A)ANTHRACENE (NG/L)		DET'N LIMIT = 20.0	GUIDELINE = N/A	
	BDL			
CHRYSENE (NG/L)		DET'N LIMIT = 50.0	GUIDELINE = N/A	
	BDL			
DIMETH. BENZ(A)ANTHR (NG/L)		DET'N LIMIT = 5.0	GUIDELINE = N/A	
	BDL			
BENZO(E) PYRENE (NG/L)		DET'N LIMIT = 50.0	GUIDELINE = N/A	
	BDL			
BENZO(B) FLUORANTHENE (NG/L)		DET'N LIMIT = 10.0	GUIDELINE = N/A	
	BDL			
PERYLENE (NG/L)		DET'N LIMIT = 10.0	GUIDELINE = N/A	
	BDL			
BENZO(K) FLUORANTHENE (NG/L)		DET'N LIMIT = 1.0	GUIDELINE = N/A	
	BDL			
BENZO(A) PYRENE (NG/L)		DET'N LIMIT = 5.0	GUIDELINE = 10 (A1)	
	BDL			

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
POLYAROMATIC HYDROCARBONS							
BENZO(G,H,I) PERYLEN (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
DIBENZO(A,H) ANTHRAC (NG/L )		DET'N LIMIT = 10.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
INDENO(1,2,3-C,D) PY (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
BENZO(B) CHRYSENE (NG/L )		DET'N LIMIT = 2.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					
CORONENE (NG/L )		DET'N LIMIT = 10.0		GUIDELINE = N/A			
12 SAMPLES	BDL	BDL					

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
POLYAROMATIC HYDROCARBONS				
BENZO(G,H,I) PERYLEN (NG/L)		DET'N LIMIT = 20.0		GUIDELINE = N/A
BDL		BDL		
DIBENZO(A,H) ANTHRAC (NG/L)		DET'N LIMIT = 10.0		GUIDELINE = N/A
BDL		BDL		
INDENO(1,2,3-C,D) PY (NG/L)		DET'N LIMIT = 20.0		GUIDELINE = N/A
BDL		BDL		
BENZO(B) CHRYSENE (NG/L)		DET'N LIMIT = 2.0		GUIDELINE = N/A
BDL		BDL		
CORONENE (NG/L)		DET'N LIMIT = 10.0		GUIDELINE = N/A
BDL		BDL		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
SPECIFIC PESTICIDES							
TOXAPHENE (NG/L )		DET'N LIMIT = 500.0		GUIDELINE = 5000 (A1)			
7 SAMPLES	BDL	BDL					
2,4,5-T (NG/L )		DET'N LIMIT = 50.0		GUIDELINE = 280000 (A1)			
6 SAMPLES	BDL						
2,4-D (NG/L )		DET'N LIMIT = 100.0		GUIDELINE = 100000 (A1)			
6 SAMPLES	BDL						
2,4-DB (NG/L )		DET'N LIMIT = 200.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
2,4 D PROPIONIC ACID (NG/L )		DET'N LIMIT = 100.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
DICAMBA (NG/L )		DET'N LIMIT = 50.0		GUIDELINE = 120000 (A1)			
6 SAMPLES	BDL						
2,4,5-TP (SILVEX) (NG/L )		DET'N LIMIT = 20.00		GUIDELINE = 10000 (A1)			
6 SAMPLES	BDL						
DIAZINON (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = 20000 (A1)			
6 SAMPLES	BDL						
DICHLOROVOS (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
CHLORPYRIFOS (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = N/A			
6 SAMPLES	BDL						
ETHION (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = 35000 (G)			
6 SAMPLES	BDL						
MALATHION (NG/L )		DET'N LIMIT = 20.0		GUIDELINE = 190000 (A1)			
6 SAMPLES	BDL						

TABLE 4

GUIDELINE = 5000 (A1)



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

SPECIFIC PESTICIDES			
MEVINPHOS (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = N/A
6 SAMPLES	BDL		
METHYL PARATHION (NG/L )		DET'N LIMIT = 50.0	GUIDELINE = 9000 (D3)
6 SAMPLES	BDL		
METHYLTRITHION (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = N/A
6 SAMPLES	BDL		
PARATHION (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = 50000 (A1)
6 SAMPLES	BDL		
PHORATE (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = 2000 (A2)
6 SAMPLES	BDL		
RELDAN (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = N/A
6 SAMPLES	BDL		
RONNEL (NG/L )		DET'N LIMIT = 20.0	GUIDELINE = N/A
6 SAMPLES	BDL		
CARBOFURAN (NG/L )		DET'N LIMIT = 2000.0	GUIDELINE = 90000 (A1)
6 SAMPLES	BDL		
CHLOROPHOPAM (CIPC) (NG/L )		DET'N LIMIT = 2000.0	GUIDELINE = 350000 (G)
6 SAMPLES	BDL		
DIALLATE (NG/L )		DET'N LIMIT = 2000.0	GUIDELINE = N/A
6 SAMPLES	BDL		
EPTAM (NG/L )		DET'N LIMIT = 2000.0	GUIDELINE = N/A
6 SAMPLES	BDL		
IPC (NG/L )		DET'N LIMIT = 2000.0	GUIDELINE = N/A
6 SAMPLES	BDL		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
SPECIFIC PESTICIDES							
PROPOXUR (NG/L)		DET'N LIMIT = 2000.0		GUIDELINE = 140000 (D3)			
6 SAMPLES	BDL						
CARBARYL (NG/L)		DET'N LIMIT = 200.0		GUIDELINE = 90000 (A1)			
6 SAMPLES	BDL						
BUTYLATE (NG/L)		DET'N LIMIT = 2000.0		GUIDELINE = 245000 (D3)			
6 SAMPLES	BDL						

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 ANHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
VOLATILES							
BENZENE (UG/L )		DET'N LIMIT = 0.05					
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
GUIDELINE = 5 (A1)							
TOLUENE (UG/L )		DET'N LIMIT = 0.05					
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
GUIDELINE = 24 (A3)							
ETHYLBENZENE (UG/L )							
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
GUIDELINE = 2.4 (A3)							
P-XYLENE (UG/L )							
1991 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 MAY	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 JUL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 SEP	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1992 NOV	BDL	BDL	BDL	BDL	BDL	BDL	BDL
GUIDELINE = 300 (A3*)							
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW		DIST. SYSTEM RICHMOND ST STANDING		DIST. SYSTEM VENTNOR AVE FREE FLOW		DIST. SYSTEM VENTNOR AVE STANDING	
VOLATILES		DET'N LIMIT = 0.05		DET'N LIMIT = 0.05		GUIDELINE = .5 (A1)	
BENZENE (UG/L)		BDL		BDL		.	
TOLUENE (UG/L)		BDL		DET'N LIMIT = 0.05		GUIDELINE = 24 (A3)	
1991 JAN	BDL	.	.	BDL	.	.	.
1991 MAR	BDL	.	.	.	.	.	.
1991 MAY	BDL	.	.	BDL	.	.	.
1991 JUL	.	.	.	.	.	.	.
1991 SEP	BDL	.	.	.	.	.	.
1992 JAN	BDL	.	.	.	.	.	.
1992 MAY	.	.	.	.100 <T	.	.	.
1992 SEP	.	.	.	.100 <T	.	.	.
ETHYLBENZENE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 2.4 (A3)		.	
1991 JAN	.	.	.	BDL	.	.	.
1991 MAR	BDL	.	.	.	.	.	.
1991 MAY	.150 <T	.	.	.	.	.	.
1991 JUL	.	.	.	.050 <T	.	.	.
1991 SEP	.150 <T	.	.	.	.	.	.
1992 JAN	.100 <T	.	.	.	.	.	.
1992 MAY	.	.	.	.200 <T	.	.	.
1992 SEP	.	.	.	.250 <T	.	.	.
P-XYLENE (UG/L)		DET'N LIMIT = 0.10		GUIDELINE = 300 (A3*)		.	
BDL		BDL		BDL		.	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURC WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
VOLATILES							
M-XYLENE (UG/L)		DET'N LIMIT = 0.10		GUIDELINE = 300 (A3*)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	BDL					
1991 SEP	BDL	BDL					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL					
1992 MAY	BDL	BDL					
1992 JUL	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					
O-XYLENE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 300 (A3*)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	BDL					
1991 SEP	BDL	BDL					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL					
1992 MAY	BDL	BDL					
1992 JUL	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					
STYRENE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 100 (D1)			
1991 JAN	.050 <T	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	BDL					
1991 SEP	BDL	BDL					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL					
1992 MAY	BDL	BDL					
1992 JUL	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					
1,1-DICHLOROETHYLENE (UG/L)		DET'N LIMIT = 0.100		GUIDELINE = 7 (D1)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	BDL					
1991 MAY	BDL	BDL					
1991 JUL	BDL	BDL					
1991 SEP	BDL	BDL					
1991 NOV	BDL	BDL					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL					
1992 MAY	BDL	BDL					
1992 JUL	BDL	BDL					
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL					
37 SAMPLES		BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
VOLATILES				
M-XYLENE (UG/L)		DET'N LIMIT = 0.10	GUIDELINE = 300 (A3*)	
1991 JAN		BDL		
1991 MAR				
1991 MAY				
1991 JUL		BDL		
1991 SEP				
1992 JAN				
1992 MAY		BDL		
1992 SEP		.400 <T		
O-XYLENE (UG/L)				
		DET'N LIMIT = 0.05	GUIDELINE = 300 (A3*)	
1991 JAN		BDL		
1991 MAR				
1991 MAY				
1991 JUL		BDL		
1991 SEP				
1992 JAN		BDL		
1992 MAY		.150 <T		
1992 SEP				
STYRENE (UG/L)				
		DET'N LIMIT = 0.05	GUIDELINE = 100 (D1)	
1991 JAN		BDL		
1991 MAR				
1991 MAY		.250 <T		
1991 JUL		.100 <T		
1991 SEP				
1992 JAN		.200 <T		
1992 MAY		.300 <T		
1992 SEP		.350 <T		
1,1-DICHLOROETHYLENE (UG/L)				
		DET'N LIMIT = 0.100	GUIDELINE = 7 (D1)	
BDL		BDL		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	OIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM PORT ST FREE FLOW	DIST. SYSTEM PORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
VOLATILES							
METHYLENE CHLORIDE (UG/L )		DET'N LIMIT = 0.50		GUIDELINE = 50 (A1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
T12-DICHLOROETHYLENE (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 70 (O1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,1'-DICHLOROETHANE (UG/L )		DET'N LIMIT = 0.100		GUIDELINE = N/A			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CHLOROFORM (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 350 (A1*)			
1991 JAN	BDL	11.100	6.400	BDL	BDL	BDL	BDL
1991 MAR	BDL	13.200	BDL	BDL	BDL	BDL	BDL
1991 MAY	BDL	17.300	BDL	BDL	BDL	BDL	BDL
1991 JUL	BDL	11.300	9.900	BDL	BDL	BDL	BDL
1991 SEP	BDL	10.300	BDL	BDL	BDL	BDL	BDL
1991 NOV	BDL	5.500	BDL	BDL	BDL	BDL	BDL
1992 JAN	BDL	7.200	BDL	BDL	BDL	BDL	BDL
1992 MAR	BDL	15.800	BDL	BDL	BDL	BDL	BDL
1992 MAY	BDL	10.700	BDL	BDL	BDL	BDL	BDL
1992 JUL	BDL	7.900	BDL	BDL	BDL	BDL	BDL
1992 SEP	BDL	35.100	BDL	BDL	BDL	BDL	BDL
1992 NOV	BDL	9.000	BDL	BDL	BDL	BDL	BDL
111,TRICHLOROETHANE (UG/L )		DET'N LIMIT = 0.02		GUIDELINE = 200 (O1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-DICHLOROETHANE (UG/L )		DET'N LIMIT = 0.05		GUIDELINE = 5 (A1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
CARBON TETRACHLORIDE (UG/L )		DET'N LIMIT = 0.20		GUIDELINE = 5 (A1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
1,2-DICHLOROPROPANE (UG/L )		DET'N LIMIT = 0.05		GUIDELINE = 5 (O1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TRICHLOROETHYLENE (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 50 (A1)			
37 SAMPLES	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
VOLATILES				
METHYLENE CHLORIDE (UG/L)		DET'N LIMIT = 0.50	GUIDELINE = 50 (A1)	
BDL		BDL		
-----				
TT2-DICHLOROETHYLENE (UG/L)		DET'N LIMIT = 0.10	GUIDELINE = 70 (D1)	
BDL		BDL		
-----				
1,1-DICHLOROETHANE (UG/L)		DET'N LIMIT = 0.100	GUIDELINE = N/A	
BDL		BDL		
-----				
CHLOROFORM (UG/L)		DET'N LIMIT = 0.10	GUIDELINE = 350 (A1+)	
1991 JAN		9.100		
1991 MAR				
1991 MAY				
1991 JUL		10.600		
1991 SEP				
1992 JAN		10.500		
1992 MAY		27.300		
1992 SEP				
-----				
111, TRICHLOROETHANE (UG/L)		DET'N LIMIT = 0.02	GUIDELINE = 200 (D1)	
BDL		BDL		
-----				
1,2 DICHLOROETHANE (UG/L)		DET'N LIMIT = 0.05	GUIDELINE = 5 (A1)	
BDL		BDL		
-----				
CARBON TETRACHLORIDE (UG/L)		DET'N LIMIT = 0.20	GUIDELINE = 5 (A1)	
BDL		BDL		
-----				
1,2-DICHLOROPROPANE (UG/L)		DET'N LIMIT = 0.05	GUIDELINE = 5 (D1)	
BDL		BDL		
-----				
TRICHLOROETHYLENE (UG/L)		DET'N LIMIT = 0.10	GUIDELINE = 50 (A1)	
BDL		BDL		
-----				



TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
VOLATILES							
DICHLOBROMOMETHANE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 350 (A1+)			
1991 JAN	BDL	8.400					
1991 MAR	BDL	8.400					
1991 MAY	150 <T	11.200					
1991 JUL	BDL	6.300					
1991 SEP	BDL	6.000					
1991 NOV	BDL	6.000					
1992 JAN	BDL	7.750					
1992 MAR	BDL	10.750		4.850			
1992 MAY	BDL	8.300					
1992 JUL	BDL	10.050				8.600	
1992 SEP	BDL	10.250					
1992 NOV	BDL	7.750				4.800	
112-TRICHLOROETHANE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 0.6 (D4)			
37 SAMPLES	BDL	BDL		BDL		BDL	
CHLORODIBROMOMETHANE (UG/L)		DET'N LIMIT = 0.10		GUIDELINE = 350 (A1+)			
1991 JAN	BDL	3.300					
1991 MAR	BDL	3.200					
1991 MAY	BDL	3.700					
1991 JUL	BDL	2.600					
1991 SEP	BDL	3.400					
1991 NOV	BDL	4.200					
1992 JAN	BDL	4.600					
1992 MAR	BDL	5.100		2.900			
1992 MAY	BDL	4.500					
1992 JUL	BDL	7.500				6.600	
1992 SEP	BDL	1.900					
1992 NOV	BDL	3.500				2.400	
TETRACHLOROETHYLENE (UG/L)		DET'N LIMIT = 0.05		GUIDELINE = 65 (A5)			
37 SAMPLES	BDL	BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	
VOLATILES				
DICHLOROBROMOMETHANE (UG/L)		DET'N LIMIT = 0.05	GUIDELINE = 350 (A1+)	
1991 JAN	-	5.350	-	-
1991 MAR	-	-	-	-
1991 MAY	-	-	-	-
1991 JUL	-	4.650	-	-
1991 SEP	-	-	-	-
1992 JAN	-	-	-	-
1992 MAY	-	7.000	-	-
1992 SEP	-	9.500	-	-
112-TRICHLOROETHANE (UG/L)				GUIDELINE = 0.6 (D4)
BDL	-	BDL	-	-
CHLORO DibROMOMETHANE (UG/L)				GUIDELINE = 350 (A1+)
1991 JAN	-	2.000	-	-
1991 MAR	-	-	-	-
1991 MAY	-	-	-	-
1991 JUL	-	2.300	-	-
1991 SEP	-	-	-	-
1992 JAN	-	-	-	-
1992 MAY	-	3.900	-	-
1992 SEP	-	2.600	-	-
TETRACHLOROETHYLENE (UG/L)				GUIDELINE = 65 (A5)
BDL	-	BDL	-	-

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM PORT ST. FREE FLOW	DIST. SYSTEM PORT ST. STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
VOLATILES							
BROMOFORM (UG/L )		DET'N LIMIT = 0.20		GUIDELINE = 350 (A1*)			
1991 JAN	BDL	BDL					
1991 MAR	BDL	.200 <T					
1991 MAY	BDL	.400 <T					
1991 JUL	BDL	BDL					
1991 SEP	BDL	.400 <T					
1991 NOV	BDL	.600 <T					
1992 JAN	BDL	BDL					
1992 MAR	BDL	BDL		BDL			
1992 MAY	BDL	BDL					
1992 JUL	BDL	1.400 <T				1.000 <T	
1992 SEP	BDL	BDL					
1992 NOV	BDL	BDL				BDL	
1,1,2-TRICHLOROETHANE (UG/L )		DET'N LIMIT = 0.05		GUIDELINE = 0.17 (D4)			
37 SAMPLES	BDL	BDL		BDL		BDL	
VINYL CHLORIDE (UG/L )		DET'N LIMIT = 0.100		GUIDELINE = 2 (D1)			
15 SAMPLES	BDL	BDL		BDL		BDL	
C12-DICHLOROETHYLENE (UG/L )		DET'N LIMIT = 0.100		GUIDELINE = 70 (D1)			
15 SAMPLES	BDL	BDL		BDL		BDL	
CHLOROBENZENE (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 1510 (D3)			
37 SAMPLES	BDL	BDL		BDL		BDL	
1,4-DICHLOROBENZENE (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 5 (A1)			
37 SAMPLES	BDL	BDL		BDL		BDL	
1,3-DICHLOROBENZENE (UG/L )		DET'N LIMIT = 0.10		GUIDELINE = 3750 (D3)			
37 SAMPLES	BDL	BDL		BDL		BDL	
1,2-DICHLOROBENZENE (UG/L )		DET'N LIMIT = 0.05		GUIDELINE = 200 (A1)			
37 SAMPLES	BDL	BDL		BDL		BDL	
ETHYLENE DIBROMIDE (UG/L )		DET'N LIMIT = 0.05		GUIDELINE = 50 (D1)			
37 SAMPLES	BDL	BDL		BDL		BDL	

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

VOLATILES		DET'N LIMIT = 0.20		GUIDELINE = 350 (A1+)	
DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING		
BROMOFORM (UG/L)					
1991 JAN	.	BDL	.	.	.
1991 MAR	.200 <T	.	.	.	.
1991 MAY	.400 <T	.	.	.	.
1991 JUL	.	BDL	.	.	.
1991 SEP	.400 <T	.	.	.	.
1992 JAN	BDL	.	.	.	.
1992 MAY	.	BDL	.	.	.
1992 SEP	.	BDL	.	.	.
1122-TETRACHLOROETHANE (UG/L)					
.	.	DET'N LIMIT = 0.05	.	GUIDELINE = 0.17 (D4)	.
VINYL CHLORIDE (UG/L)					
BDL	.	BDL	.	.	.
DET'N LIMIT = 0.100					
GUIDELINE = 2 (D1)					
C12-DICHLOROETHYLENE (UG/L)					
.	.	BDL	.	.	.
DET'N LIMIT = 0.100					
GUIDELINE = 70 (D1)					
CHLOROBENZENE (UG/L)					
.	.	BDL	.	.	.
DET'N LIMIT = 0.10					
GUIDELINE = 1510 (D3)					
1,4-DICHLOROBENZENE (UG/L)					
BDL	.	BDL	.	.	.
DET'N LIMIT = 0.10					
GUIDELINE = 5 (A1)					
1,3-DICHLOROBENZENE (UG/L)					
BDL	.	BDL	.	.	.
DET'N LIMIT = 0.10					
GUIDELINE = 3750 (D3)					
1,2-DICHLOROBENZENE (UG/L)					
BDL	.	BDL	.	.	.
DET'N LIMIT = 0.05					
GUIDELINE = 200 (A1)					
ETHYLENE DIBROMIDE (UG/L)					
BDL	.	BDL	.	.	.
DET'N LIMIT = 0.05					
GUIDELINE = 50 (D1)					
BDL					

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	VOLATILES							
		TOTL TRIHALOMETHANES (UG/L)		DET'N LIMIT = 0.50		GUIDELINE = 350 (A1)			
		DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM FREE FLOW	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING	
1991 JAN	BDL								
1991 MAR	22.850	12.400							
1991 MAY	BDL								
1991 JUL	BDL								
1991 SEP	BDL	17.650							
1991 NOV	BDL								
1992 JAN	BDL								
1992 MAR	BDL								
1992 MAY	BDL			13.750					
1992 JUL	BDL								
1992 SEP	BDL						23.300		
1992 NOV	BDL						13.400		

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

DIST. SYSTEM RICHMOND ST FREE FLOW	DIST. SYSTEM RICHMOND ST STANDING	DIST. SYSTEM VENTNOR AVE FREE FLOW	DIST. SYSTEM VENTNOR AVE STANDING	GUIDELINE = 350 (A1)
VOLATILES				
TOTL TRIHALOMETHANES (UG/L)		DET'N LIMIT = 0.50		
1991 JAN		16.500		
1991 MAR				
1991 MAY				
1991 JUL		17.550		
1991 SEP				
1992 JAN		21.400		
1992 MAY		39.400		
1992 SEP				

TABLE 4  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992 AMHERSTBURG WSS

TREATMENT PLANT RAW	TREATMENT PLANT TREATED	DIST. SYSTEM DALHOUSIE ST FREE FLOW	DIST. SYSTEM DALHOUSIE ST STANDING	DIST. SYSTEM FORT ST FREE FLOW	DIST. SYSTEM FORT ST STANDING	DIST. SYSTEM MEDITERRANEAN FREE FLOW	DIST. SYSTEM MEDITERRANEAN STANDING
RADIONUCLIDES							
COBALT 60 (BQ/L)		DET'N LIMIT = 0.70		GUIDELINE = N/A			
8 SAMPLES	BDL						
CESIUM 134 (BQ/L)		DET'N LIMIT = 0.70		GUIDELINE = N/A			
8 SAMPLES	BDL						
CESIUM 137 (BQ/L)		DET'N LIMIT = 0.70		GUIDELINE = 50 (A1)			
8 SAMPLES	BDL						
GROSS ALPHA COUNT (BQ/L)		DET'N LIMIT = 0.04		GUIDELINE = 0.55 (D1)			
1991 MAR	.050						
1991 SEP	.040						
1992 MAR	.130						
1992 SEP	.070						
GROSS BETA COUNT (BQ/L)		DET'N LIMIT = 0.04		GUIDELINE = N/A			
1991 MAR	.100						
1991 SEP	.110						
1992 MAR	.170						
1992 SEP	.080						
TRITIUM (BQ/L)		DET'N LIMIT = 7.00		GUIDELINE = 40000 (A1)			
1991 MAR	BDL						
1991 SEP	10,000						
1992 MAR	BDL						
1992 SEP	BDL						
IODINE 131 (BQ/L)		DET'N LIMIT = 0.70		GUIDELINE = 10 (A1)			
8 SAMPLES	BDL						

TABLE 5  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER -----	UNIT -----	DETECTION LIMIT -----	GUIDELINE -----
BACTERIOLOGICAL			
FECAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	0 (A1)
STANDARD PLATE COUNT MEMBRANE FILT.	CT/ML	0	500/ML (A3)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100ML (A1)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	0	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	0	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	0	N/A
FIELD PH	DMNSLESS	N/A	6.5-8.5 (A4)
FIELD TEMPERATURE	DEG.C	N/A	15.0 (A3)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	0.20	30-500 (A4)
AMMONIUM TOTAL	MG/L	0.002	0.05 (F2)
CALCIUM	MG/L	0.20	100.0 (F2)
CHLORIDE	MG/L	0.20	250.0 (A3)
COLOUR	TCU	0.50	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.00	400.0 (F2)
CYANIDE	MG/L	0.001	0.2 (A1)
DISSOLVED ORGANIC CARBON	MG/L	0.10	5.0 (A3)
FLUORIDE	MG/L	0.01	1.5* (A1)
HARDNESS	MG/L	0.50	80-100 (A4)
IONCAL	DMNSLESS	N/A	N/A
LANGELIERS INDEX	DMNSLESS	N/A	N/A
MAGNESIUM	MG/L	0.10	30.0 (F2)
NITRATES (TOTAL)	MG/L	0.005	10.0 (A1)
NITRITE	MG/L	0.001	1.0 (A1)
NITROGEN TOTAL KJELDAHL	MG/L	0.02	N/A
PH	DMNSLESS	N/A	6.5-8.5 (A4)
PHOSPHORUS FIL REACT	MG/L	0.0005	N/A
PHOSPHORUS TOTAL	MG/L	0.002	0.4 (F2)
POTASSIUM	MG/L	0.010	10.0 (F2)
RESIDUE FILTRATE (CALCULATED TDS)	MG/L	N/A	500.0 (A3)
SODIUM	MG/L	0.20	200.0 (A4)
SULPHATE	MG/L	0.20	500.0 (A4)
TURBIDITY	FTU	0.05	1.0 (A1)
* The Maximum Acceptable Concentration (MAC) for <u>naturally occurring fluoride</u> in drinking water is 2.4 mg/L.			
CHLOROAROMATICS			
1,2,3-TRICHLOROBENZENE	NG/L	5.0	N/A
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.0	N/A
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.0	N/A
1,2,4-TRICHLOROBENZENE	NG/L	5.0	10000 (1)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.0	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.0	N/A
2,3,6-TRICHLOROTOLUENE	NG/L	5.0	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.0	N/A
2,6A-TRICHLOROTOLUENE	NG/L	5.0	N/A
HEXACHLOROBENZENE (HCB)	NG/L	1.0	10 (C1)
HEXACHLOROBUTADIENE	NG/L	1.0	450 (D4)
HEXACHLOROETHANE	NG/L	1.0	1900 (D4)
OCTACHLOROSTYRENE	NG/L	1.0	N/A
PENTACHLOROBENZENE	NG/L	1.0	74000 (D4)
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	100.0	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	20.0	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	10.0	N/A



TABLE 5  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
2,4,5-TRICHLOROPHENOL	NG/L	100.0	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	20.0	5000 (A1)
PENTACHLOROPHENOL	NG/L	10.0	60000 (A1)
METALS			
ALUMINUM	UG/L	0.10	100 (A4)
ANTIMONY	UG/L	0.05	146 (D4)
ARSENIC	UG/L	0.10	25 (A1)
BARIUM	UG/L	0.05	1000 (A2)
BERYLLIUM	UG/L	0.05	6800 (D4)
BORON	UG/L	2.00	5000 (A1)
CADMIUM	UG/L	0.05	5 (A1)
CHROMIUM	UG/L	0.50	50 (A1)
COBALT	UG/L	0.02	N/A
COPPER	UG/L	0.50	1000 (A3)
IRON	UG/L	6.00	300 (A3)
LEAD	UG/L	0.05	10 (A1)
MANGANESE	UG/L	0.05	50 (A3)
MERCURY	UG/L	0.02	1 (A1)
MOLYBDENUM	UG/L	0.05	N/A
NICKEL	UG/L	0.20	350 (D3)
SELENIUM	UG/L	1.00	10 (A1)
SILVER	UG/L	0.05	N/A
STRONTIUM	UG/L	0.10	N/A
THALLIUM	UG/L	0.05	13 (D4)
TITANIUM	UG/L	0.50	N/A
URANIUM	UG/L	0.05	100 (A1)
VANADIUM	UG/L	0.05	N/A
ZINC	UG/L	0.20	5000 (A3)
POLYNUCLEAR AROMATIC HYDROCARBONS			
ANTHRACENE	NG/L	1.0	N/A
BENZO(A) ANTHRACENE	NG/L	20.0	N/A
BENZO(A) PYRENE	NG/L	5.0	10 (A1)
BENZO(B) CHRYSENE	NG/L	2.0	N/A
BENZO(B) FLUORANTHENE	NG/L	10.0	N/A
BENZO(E) PYRENE	NG/L	50.0	N/A
BENZO(G,H,I) PERYLENE	NG/L	20.0	N/A
BENZO(K) FLUORANTHENE	NG/L	1.0	N/A
CHRYSENE	NG/L	50.0	N/A
CORONENE	NG/L	10.0	N/A
DIBENZO(A,H) ANTHRACENE	NG/L	10.0	N/A
DIMETHYL BENZO(A) ANTHRACENE	NG/L	5.0	N/A
FLUORANTHENE	NG/L	20.0	42000 (D4)
INDENO(1,2,3-C,D) PYRENE	NG/L	20.0	N/A
PERYLENE	NG/L	10.0	N/A
PHENANTHRENE	NG/L	10.0	N/A
PYRENE	NG/L	20.0	N/A
PESTICIDES & PCB			
ALACHLOR (LASSO)	NG/L	500.0	5000 (A2)
ALDRIN	NG/L	1.0	700 (A1)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700 (G)
ALPHA CHLORDANE	NG/L	2.0	7000 (A1)
AMETRINE	NG/L	50.0	300000 (D3)
ATRATONE	NG/L	50.0	N/A
ATRAZINE	NG/L	50.0	60000 (A2)
DESETHYL ATRAZINE	NG/L	200.0	60000 (A2)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300 (G)
CYANAZINE (BLADEx)	NG/L	100.0	10000 (A2)
DIELDRIN	NG/L	2.0	700 (A1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000 (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	5.0	74000 (D4)
ENDOSULFAN SULPHATE (THIODAN SULPHATE)	NG/L	5.0	N/A

TABLE 5  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
ENDRIN	NG/L	5.0	1600 (D3)
GAMMA CHLORDANE	NG/L	2.0	7000 (A1)
HEPTACHLOR	NG/L	1.0	3000 (A1)
HEPTACHLOR EPOXIDE	NG/L	1.0	3000 (A1)
HEXACHLOROCYCLOPENTADIENE	NG/L	5.0	206000 (D4)
LINDANE (GAMMA BHC)	NG/L	1.0	4000 (A1)
METHOXYCHLOR	NG/L	5.0	900000 (A1)
METOLACHLOR	NG/L	500.0	50000 (A2)
METRIBUZIN (SENCOR)	NG/L	100.0	80000 (A1)
MIREX	NG/L	5.0	N/A
P,P-DDD	NG/L	5.0	30000 (A1)
O,P-DDT	NG/L	5.0	30000 (A1)
P,P-DDT	NG/L	5.0	30000 (A1)
P,P-DDE	NG/L	1.0	30000 (A1)
OXYCHLORDANE	NG/L	2.0	N/A
PCB	NG/L	20.0	3000 (A2)
PROMETONE	NG/L	50.0	52500 (D3)
PROMETRYNE	NG/L	50.0	1000 (A2)
PROPAZINE	NG/L	50.0	700000 (D3)
SIMAZINE	NG/L	50.0	10000 (A2)
DESETHYL SIMAZINE	NG/L	200.0	10000 (A2)
TOXAPHENE	NG/L	500.0	5000 (A1)
PHENOLICS			
PHENOLICS (UNFILTERED REACTIVE)	UG/L	0.2	N/A
SPECIFIC PESTICIDES			
2,4 D PROPIONIC ACID	NG/L	100.0	N/A
2,4,5-TRICHLOROPHENOXY ACETIC ACID	NG/L	50.0	280000 (A1)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.0	100000 (A1)
2,4-DICHLOROPHENOXYBUTYRIC ACID (2,4-DB)	NG/L	200.0	N/A
2,4,5-TP (SILVEX)	NG/L	20.0	10000 (A1)
BUTYLATE (SUTAN)	NG/L	2000.0	245000 (D3)
CARBARYL (SEVIN)	NG/L	200.0	90000 (A1)
CARBOFURAN	NG/L	2000.0	90000 (A1)
CHLORPROPHAM (CIPC)	NG/L	2000.0	350000 (G)
CHLORPYRIFOS (DURSBAN)	NG/L	20.0	N/A
DIALLATE	NG/L	2000.0	N/A
DIAZINON	NG/L	20.0	20000 (A1)
DICAMBA	NG/L	50.0	120000 (A1)
DICHLOROVOS	NG/L	20.0	N/A
EPTAM	NG/L	2000.0	N/A
ETHION	NG/L	20.0	35000 (G)
IPC	NG/L	2000.0	N/A
MALATHION	NG/L	20.0	190000 (A1)
METHYL PARATHION	NG/L	50.0	9000 (D3)
METHYLTRITHION	NG/L	20.0	N/A
MEVINPHOS	NG/L	20.0	N/A
PARATHION	NG/L	20.0	50000 (A1)
PHORATE (THIMET)	NG/L	20.0	2000 (A2)
PICHLORAM	NG/L	100.0	190000 (A2)
PROPOXUR (BAYGON)	NG/L	2000.0	140000 (D3)
RELDAN	NG/L	20.0	N/A
RONNEL	NG/L	20.0	N/A
VOLATILES			
1,1-DICHLOROETHANE	UG/L	0.10	N/A
1,1-DICHLOROETHYLENE	UG/L	0.10	7 (D1)
1,2-DICHLOROBENZENE	UG/L	0.05	200 (A1)
1,2-DICHLOROETHANE	UG/L	0.05	5 (A1)
1,2-DICHLOROPROPANE	UG/L	0.05	5 (D1)
1,3-DICHLOROBENZENE	UG/L	0.10	3750 (D3)
1,4-DICHLOROBENZENE	UG/L	0.10	5 (A1)
1,1,1-TRICHLOROETHANE	UG/L	0.02	200 (D1)
1,1,2-TRICHLOROETHANE	UG/L	0.05	0.6 (D4)
1,1,2,2-TETRACHLOROETHANE	UG/L	0.05	0.17 (D4)

TABLE 5  
DRINKING WATER SURVEILLANCE PROGRAM 1991 AND 1992

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BENZENE	UG/L	0.05	5 (A1)
BROMOFORM	UG/L	0.20	350 (A1+)
CARBON TETRACHLORIDE	UG/L	0.20	5 (A1)
CHLOROBENZENE	UG/L	0.10	1510 (D3)
CHLORODIBROMOMETHANE	UG/L	0.10	350 (A1+)
CHLOROFORM	UG/L	0.10	350 (A1+)
CIS 1,2-DICHLOROETHYLENE	UG/L	0.10	70 (D1)
DICHLOROBROMOMETHANE	UG/L	0.05	350 (A1+)
ETHYLENE DIBROMIDE	UG/L	0.05	50 (D1)
ETHYLBENZENE	UG/L	0.05	2.4 (A3)
M-XYLENE	UG/L	0.10	300 (A3*)
METHYLENE CHLORIDE	UG/L	0.50	50 (A1)
O-XYLENE	UG/L	0.05	300 (A3*)
P-XYLENE	UG/L	0.10	300 (A3*)
STYRENE	UG/L	0.05	100 (D1)
TETRACHLOROETHYLENE	UG/L	0.05	65 (A5)
TRANS 1,2-DICHLOROETHYLENE	UG/L	0.10	70 (D1)
TOLUENE	UG/L	0.05	24 (A3)
TOTAL TRIHALOMETHANES	UG/L	0.50	350 (A1)
TRICHLOROETHYLENE	UG/L	0.10	50 (A1)
VINYL CHLORIDE	UG/L	0.10	2 (D1)
RADIONUCLIDES			
TRITIUM	BQ/L	7.0	40000 (A1)
GROSS ALPHA COUNT	BQ/L	0.04	0.55# (D1)
GROSS BETA COUNT	BQ/L	0.04	N/A
COBALT 60	BQ/L	0.70	N/A
CESIUM 134	BQ/L	0.70	N/A
CESIUM 137	BQ/L	0.70	50 (A1)
IODINE 131	BQ/L	0.70	10 (A1)

# Equal to 15.0 Picocuries/litre

DRINKING WATER SURVEILLANCE PROGRAM  
PROGRAM DESCRIPTION

The Drinking Water Surveillance Program (DWSP) for Ontario monitors drinking water quality at municipal water supply systems. The DWSP Database Management System provides a computerized drinking water quality information system for the supplies monitored. The objectives of the program are to provide:

- immediate, reliable, current information on drinking water quality;
- a flagging mechanism for guideline exceedance;
- a definition of contaminant levels and trends;
- a comprehensive background for remedial action;
- a framework for assessment of new contaminants; and
- an indication of treatment efficiency of plant processes.

PROGRAM

The DWSP officially began in April 1986 and is designed to eventually include all municipal water supplies in Ontario. In 1992, 109 systems were being monitored. Water supply locations have been prioritized for surveillance based primarily on criteria such as population density, probability of contamination and geographical location.

An ongoing assessment of future monitoring requirements at each location will be made. Monitoring will continue at the initial locations at an appropriate level and further locations will be phased into the program as resources permit.

A major goal of the program is to collect valid water quality data in context with plant operational characteristics at the time of sampling. As soon as sufficient data have been accumulated and analyzed, both the frequency of sampling and the range of parameters may be adjusted accordingly.

Assessments are carried out at all locations prior to initial sampling, in order to acquire complete plant process and distribution system details and to designate (and retrofit if necessary) all sampling systems and locations. This ensures that the sampled water is a reflection of the water itself.

Samples are taken of raw (ambient water) and treated water at the treatment plant and of consumer's tap water in the distribution system. In order to determine possible effects of distribution on water quality, both standing and free flow water in old and new sections of the distribution system are sampled. Sampling is carried out by operational personnel who have been trained in applicable procedures.

Comprehensive standardized procedures and field test kits are supplied to sampling personnel. This ensures that samples are taken and handled according to standard protocols and that field testing will supply reliable data. All field and laboratory analyses are carried out using "approved documented procedures". Most laboratory analyses are carried out by the Ministry of Environment and Energy (MOEE), Laboratory Services Branch. Radionuclides are analyzed by the Ministry of Labour.

## DATA REPORTING MECHANISM

When the analytical results are transferred from the MOEE laboratory into the DWSP system, printouts of the completed analyses are sent to the MOEE District Officer, the appropriate operational staff and are also retained by the DWSP unit.

## PROGRAM INPUTS AND OUTPUTS

There are four major inputs and four major outputs in the program.

### Program Input - Plant and Distribution System Description

The system description includes plant specific non-analytical information acquired through a questionnaire and an initial plant visit. During the initial assessment of the plant and distribution system, questionnaire content is verified and missing information added. It is intended that all data be kept current with scheduled annual updates.

The Plant and Distribution System Description consists of the following seven components:

#### 1. PROCESS COMPONENT INVENTORY

All physical and chemical processes to which the water is subjected, from the intake pipe to the consumers' tap (where possible), are documented. These include: process type, general description of physical structures, material types, sizes, and retention time for each process within the plant. The processes may be as simple as transmission or as complex as carbon adsorption.

#### 2. TREATMENT CHEMICALS

Chemicals used in the treatment processes, their function, application point, supplier and brand-name are recorded. Chemical dosages applied on the day of sampling are recorded in DWSP.

#### 3. PROCESS CONTROL MEASUREMENTS

Documentation of in-plant monitoring of process parameters (eg. turbidity, chlorine residuals, pH, aluminum residuals) including methods used, monitoring locations and frequency is contained in this section. Except for the recorded Field Data, in-plant monitoring results are not retained in DWSP but are retained by the water treatment plant personnel.

#### 4. DESIGN FLOW AND RETENTION TIME

Hydraulic capacity, designed and actual, is noted here. Retention time (the time that a block of water is retained in the plant) is also noted. Maximum, minimum and average flow, as well as a record of the flow rate on the day of sampling, are recorded in DWSP.

#### 5. DISTRIBUTION SYSTEM DESCRIPTION

This area includes the storage and transmission characteristics of the distribution system after the water leaves the plant.

## 6. SAMPLING SYSTEM

Each plant is assessed for its adequacy in terms of the sampling of bacteriological, organic and inorganic parameters. Prime considerations in the assessment and design of the sampling system are:

- i/ the sample is an accurate representation of the actual water condition, eg. raw water has had no chemical treatment;
- ii/ the water being sampled is not being modified by the sampling system;
- iii/ the sample tap must be in a clean area of the plant, preferably a lab area; and
- iv/ the sample lines must be organically inert (no plastic, ideally stainless steel).

It is imperative that the sampled water be a reflection not of the sampling system but of the water itself.

The sampling system documentation includes: origin of the water; date sampling was initiated; size, length and material type (intake, discharge and tap); pump characteristics (model, type, capacity); and flow rate.

## 7. PERSONNEL

This section contains the names, addresses and phone numbers of current plant management and operational staff, distribution system management and operational staff, Medical Officer of Health and appropriate MOEE personnel associated with the plant.

### Program Input - Field Data

The second major input to DWSP is field data. Field data is collected at the plant and from the distribution system sites on the day of sampling. Field data consists of general operating conditions and the results of testing for field parameters. General operating conditions include chemicals used, dosages, flow and retention time on the day of sampling, as well as, monthly maximum, minimum and average flows. Field parameters include turbidity, chlorine residuals (free, combined and total), temperature and pH. These parameters are analyzed according to standardized DWSP protocols to allow for interplant comparison.

### Program Input - Laboratory Analytical Data

The third major input to DWSP is Laboratory Analytical Data. Samples gathered from the raw, treated and distribution sampling sites are analyzed for the presence of approximately 180 parameters at a frequency of two to twelve times per year. Sixty-five percent of the parameters are organic. Parameters measured may have health or aesthetic implications when present in drinking water. Many of the parameters may be used in the treatment process or may be treatment by-products. Due to the nature of certain analytical instruments, parameters may be measured in a "scan" producing some results for parameters that are not on the DWSP priority list, but which may be of interest. The majority of parameters are measured on a routine basis. Those that are technically more difficult and/or costly to analyze, however, are done less frequently. These include Specific Pesticides and Chlorophenols.



Although the parameter list is extensive, additional parameters with the potential to cause health or aesthetic related problems may be added provided reliable analytical and sampling methods exist.

All laboratory generated data is derived from standardized, documented analytical protocols. The analytical method is an integral part of the data and as methods change, notation will be made and comparison data documented.

#### Program Input - Parameter Reference Information

The fourth major input to DWSP is Parameter Reference Information. This is a catalogue of information for each substance analyzed on DWSP. It includes parameter name and aliases, physical and chemical properties, basic toxicology, world-wide health limits, treatment methods and uses. The Parameter Reference Information is computerized and can be accessed through the Query function of the DWSP database. An example is shown in figure 1.

#### Program output - Query

All DWSP information is easily accessed through the Query function, therefore, anything from addresses of plant personnel to complete water quality information for a plant's water supply is instantly available. The DWSP computer system makes relatively complex inquiries manageable. A personal password allowing access into the DWSP query mode in all MOEE offices is being developed by the DWSP group.

#### Program Output - Action Alerts

Drinking Water quality in Ontario is evaluated against provincial objectives as outlined in the Ontario Drinking Water Objectives publication. Should the reported level of a substance in treated water exceed the Ontario Drinking Water Objective, an "Action Alert" requiring resampling and confirmation is issued. This assures that operational staff, health authorities and the public are notified as soon as possible of the confirmation of an exceedance and remedial action taken. This report supplies a history of the occurrence of past exceedances at the plant plus a historical summary on the parameter of concern.

In the absence of Ontario Drinking Water Objectives, guidelines/limits from other agencies are used. The Parameter Listing System, published by MOEE (ISBN 0-7729-4461-X), catalogues and keeps current guidelines for 650 parameters from agencies throughout the world. If these guidelines are exceeded, the results are flagged and evaluated by DWSP personnel. An "Action Alert" will be issued if warranted.

#### Program Output - Report Generation

Custom reports can be generated from DWSP to meet MOEE Regional needs and to respond to public requests.

#### Program Output - Annual Reports

It is the practice of DWSP to produce an annual report containing analytical data along with companion plant information.

FIG.1

PARAMETER REFERENCE INFORMATION

NAME: BENZENE

CAS#: 71-43-2

MOLECULAR FORMULAE:  $C_6H_6$

DETECTION LIMIT: (FOR METHOD POCODO) 0.05  $\mu g/L$

SYNONYMS: BENZOL; BENZOLE; COAL NAPHTHA; CARBON OIL (27)  
CYCLOHEXATRIENE (41)

CHARACTERISTICS: COLOURLESS TO LIGHT-YELLOW, MOBILE, NONPOLAR LIQUID, OF  
HIGHLY REFRACTIVE NATURE, AROMATIC ODOUR; VAPOURS BURN  
WITH SMOKING FLAME (30)

PROPERTIES: SOLUBILITY IN WATER: 1780-1800 mg/L AT 25C (41)  
THRESHOLD ODOUR: 0.5 - 10 PPM IN WATER  
THRESHOLD TASTE: 0.5 mg/L IN WATER (39)  
ENVIRONMENTAL FATE: MAY BIOACCUMULATE IN LIVING ORGANISMS  
AND APPEARS TO ACCUMULATE IN ANIMAL TISSUES THAT EXHIBIT  
A HIGH LIPID CONTENT OR REPRESENT MAJOR METABOLIC SITES,  
SUCH AS LIVER OR BRAIN; SMALL QUANTITIES EVAPORATE FROM  
SOILS OR ARE DEGRADED RATHER QUICKLY (80)

SOURCES: COMMERCIAL: PETROLEUM REFINING; SOLVENT RECOVERY; COAL TAR  
DISTILLATION (39); FOOD PROCESSING AND TANNING INDUSTRIES;  
COMBUSTION OF CAR EXHAUST.  
ENVIRONMENTAL: POSSIBLE SOURCE IS RUNOFF.

USES: DETERGENTS; NYLON; INTERMEDIATE IN PRODUCTION OF OTHER  
COMPOUNDS, SUCH AS PESTICIDES; SOLVENT FOR EXTRACTION AND  
RECTIFICATION IN RUBBER INDUSTRY; DEGREASING AND CLEANSING  
AGENT; GASOLINE.

REMOVAL: THE FOLLOWING PROCESSES HAVE BEEN SUCCESSFUL IN REMOVING  
BENZENE FROM WASTEWATER: GAC ADSORPTION, PRECIPITATION  
WITH ALUM AND SUBSEQUENT REMOVAL VIA SEDIMENTATION,  
COAGULATION AND FLOCCULATION, SOLVENT EXTRACTION,  
OXIDATION

ADDITIONAL PROPERTIES: MOLECULAR WEIGHT: 78.12  
MELTING POINT: 5.5°C (27)  
BOILING POINT: 80.1°C (27)  
SPECIFIC GRAVITY: 0.8790 AT 20°C (27)  
VAPOUR PRESSURE: 100 MM AT 26.1°C (27)  
HENRY'S LAW CONSTANT: 0.00555 ATM-M3/MOLE (41)  
LOG OCT./WATER PARTITION COEFFICIENT: 1.95 TO 2.13. (39)  
CARBON ADSORPTION: K=1.0; 1/N=1.6; R=0.97; PH=5.3 (41)  
SEDIMENT/WATER PARTITION COEFFICIENT: NO DATA



DWSP SAMPLING GUIDELINE

i) Raw and Treated at Plant

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Bacteriological	-220 mL plastic bottle with white seal on cap -do <u>not</u> rinse bottle, preservative has been added -avoid touching bottle neck or inside of cap -fill to top of red label as marked
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid ( $\text{HNO}_3$ ) (Caution: $\text{HNO}_3$ is corrosive)
Volatiles (duplicates) (OPOPUP)	-45 mL glass vial with septum (teflon side must be in contact with sample) -do <u>not</u> rinse bottle -fill bottle completely without bubbles
Organics (OWOC), (OWTRI)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top
Specific Pesticides (OWCP), (PEOP), (PECAR)	-as per Organics -three extra bottles must be filled
Polyaromatic hydrocarbons (OAPAHX)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top -add 25 drops of sodium thiosulphate
Cyanide (Treated only)	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops sodium hydroxide ( $\text{NaOH}$ ) (Caution: $\text{NaOH}$ is corrosive)
Mercury	-250 mL glass bottle -rinse bottle and cap three times -fill to top of label -add 20 drops each nitric acid ( $\text{HNO}_3$ ) and potassium dichromate ( $\text{K}_2\text{Cr}_2\text{O}_7$ ) (Caution: $\text{HNO}_3$ & $\text{K}_2\text{Cr}_2\text{O}_7$ are corrosive)

Phenols	-250 mL glass bottle -do <u>not</u> rinse bottle, preservative has been added -fill to top of label
Radionuclides (as scheduled)	-4 L plastic jug -do <u>not</u> rinse, carrier added -fill to 5 cm from top
Organic Characterization (GC/MS - once per year) (PBVOL), (PBEXT)	-1 L amber glass bottle; instructions as per organic -250 mL glass bottle -do <u>not</u> rinse bottle -fill completely without bubbles

Steps:

1. Let sampling water tap run for an adequate time to clear the sample line.
2. Record time of day on submission sheet.
3. Record temperature on submission sheet.
4. Fill up all bottles as per instructions.
5. Record chlorine residuals (free, combined and total for treated water only), turbidity and pH on submission sheet.
6. No smoking in area of sample location.

ii) Distribution Samples (standing water)

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid ( $\text{HNO}_3$ ) (Caution: $\text{HNO}_3$ is corrosive)

Steps:

1. Record time of day on submission sheet.
2. Place bucket under tap and open cold water.
3. Fill to predetermined volume.
4. After mixing the water, record the temperature on the submission sheet.

5. Fill general chemistry and metals bottles.

6. Record chlorine residuals (free, combined and total), turbidity and pH on submission sheet.

iii) Distribution Samples (free flow)

General Chemistry	-500 mL plastic bottle (PET 500) -rinse bottle and cap with sample water three times -fill to 2 cm from top
Bacteriological	-250 mL plastic bottle with white seal on cap -do <u>not</u> rinse bottle, preservative has been added -avoid touching bottle neck or inside of cap -fill to top of red label as marked
Metals	-500 mL plastic bottle (PET 500) -rinse bottle and cap three times -fill to 2 cm from top -add 10 drops nitric acid $\text{HNO}_3$ (Caution: $\text{HNO}_3$ is corrosive)
Volatiles (duplicate) (OPOPUP)	-45 mL glass vial with septum (teflon side must be in contact with sample) -do <u>not</u> rinse bottle, preservative has been added -fill bottle completely without bubbles
Organics (OWOC)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top
Polyaromatic Hydrocarbons (OAPAHX)	-1 L amber glass bottle per scan -do <u>not</u> rinse bottle -fill to 2 cm from top -add 25 drops of sodium thiosulphate

Steps:

1. Record time of day on submission sheet.

2. Let cold water flow for five minutes.

3. Record temperature on submission sheet.

4. Fill all bottles as per instructions.

5. Record chlorine residuals (free, combined and total), turbidity and pH on submission sheet.





